DOCUMENT RESUME

ED 234 172 CE 036 845

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TITLE A Guide for Working with Handicapped Students in Occupational Exploration.
INSTITUTION Education Service Center Region 8, Mount Pleasant, TX.
PUB DATE [80]
NOTE 106p.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Bibliographies; Career Education; *Career Exploration; *Classroom Techniques; Deafness; *Disabilities; Educational Resources; Emotional Disturbances; High Schools; Information Sources; Learning Disabilities; Mental Retardation; Partial Hearing; Physical Disabilities; Program Development; Secondary Education; Speech Handicaps; Student Evaluation; *Teaching Methods; Visual Impairments; *Vocational Evaluation

ABSTRACT

Intended to help teachers provide occupational exploration for handicapped students, this guide is also a source of information on handicapping conditions for regular classroom teachers. Guidelines are offered for occupational exploration classes, and descriptions and characteristics of students with the various handicapping conditions are provided. The handicapping conditions are discussed in eight sections; in some cases, several are combined for simplifying the discussions. The categories are (1) deaf and hard-of-hearing, (2) mentally retarded, (3) orthopedically impaired, (4) other health impaired, (5) seriously emotionally disturbed, (6) specific learning disability, (7) speech impaired, and (8) visually impaired. Each section contains a definition of the handicapping condition, a list of the behaviors the student may tend to exhibit, suggested instructional techniques, suggestions for student evaluation, modifications of equipment and materials, a teacher resource list (organizations and materials), and a bibliography. A section on vocational appraisal instruments that may be appropriate for use with special needs students is also included. Assessment areas are discussed, and information on vocational aptitude, interest tests, and work sample systems is provided. The last section lists curriculum guides for occupational exploration in six cluster areas: agribusiness and natural resources, business and office, construction, marketing and distribution, personal services, and transportation. (YLB)

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A GUIDE FOR WORKING WITH HANDICAPPED STUDENTS IN OCCUPATIONAL EXPLORATION

Project #99230127

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CE 036845

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ACKNOWLEDGEMENTS

Appreciation is extended to the students in the Occupational Exploration program and to the following school disctict personnel whose cooperation and support helped make this program possible:

Mt. Pleasant Independent School District

Dr. Terrell W. Ogg, Superintendent

Mr. Conway McDaniel, Special Education Director

Mr. John Gullion, Vocational Adjustment Coordinator

Mr. Leonard Harcrow, Vocational Director

Pittsburg Independent School District

Mr. A. W. Bell, Superintendent

Mr. Holly Chambers, Vocational Director

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INTRODUCTION

This guide was developed through a project at Region VIII Education Service Center, Mount Pleasant, Texas. The project, "A Sequential Vocational Training and Placement of Handicapped Students," sought to provide for a coordinated effort to develop, test, and implement services and programs for handicapped students in occupational exploration classes utilizing the Education Service Center and local education agencies.

This Guide for Occupational Exploration for Handicapped Students was assembled so that it might be used not only as a guide for teachers in providing occupational exploration programs for handicapped students, but for regular classroom teachers (academic and vocational) as well. Many teachers have expressed concern over not having immediate access to information that would help them to better understand handicapping conditions and to address their instruction to the unique needs of each learner.

In attempting to address teacher needs in this area, this guide was developed. Sections are included on instructional techniques, modification of equipment and materials--if needed, a teacher resource list, and bibliography for each handicapping condition. It must be mentioned, however, that particular techniques given for each condition are only suggested ones. The teacher must ultimately decide which method(s) works best for each individual in his/her class. A section on vocational appraisal instruments that may be appropriate for use with special needs students is also included.

Throughout this guide, much emphasis has been placed upon the importance of cooperation between the special education teacher and the

exploration or classroom teacher. In order to effectively meet the needs of handicapped students in the classroom both the special education teacher and the classroom teacher must understand the importance of working together. A cooperative arrangement between the two must exist in order to successfully adapt curriculum and instructional techniques to each student's potential. The special education teacher is probably one of the most valuable resources available to both regular and vocational teachers.

GUIDELINES FOR OCCUPATIONAL EXPLORATION CLASSES:

According to the Texas Education Agency, Occupational Exploration is a ninth grade placement, which may involve students in grades 9-12. The students are scheduled for a minimum of one quarter and/or a maximum of three quarters of instruction, including related activities, to provide a minimum of instruction that will:

- Provide students with in-depth instruction in the occupational field or occupations to be explored;
- Provide students with appropriate "hands-on" experiences in the field of occupations being explored; and
- Assist in providing students with shadowing or observation experiences in the community and school to ensure relevancy in making tentative career choices.

Courses in Occupational Exploration may be offered in the occupational fields or clusters of:

- Agribusiness and Natural Resources
- Business and Office
- Communications and Media
- Construction
- Consumer and Homemaking Education
- Environment
- Fine Arts and Humanities
- Health
- Manufacturing
- Marine Science
- Marketing and Distribution

- Personal Services
- Public Service
- Recreation and Hospitality (tourism)
- Transportation

In the ninth grade, exploration students narrow their career choices and have hands-on experiences in a laboratory setting. Occupational Exploration assists students in:

a. Exploring their occupational interests in depth

b. Discovering their occupational abilities

c. Narrowing occupational-career choices

d. Formulating more specific educational plans for achieving their occupational choices

Upon completion of exploration course(s), the student will be able to select a high school educational program which will be preparation for:

a. Entry into the labor market immediately upon leaving high school, or

b. Entry into post-secondary or Bachelor's Degree program preparing entry into the student's selected career, or

c. A combination of a and b if the students desire to delay or expedite continued preparation.

The last section included in this guide lists curriculum guides that have been used for occupational exploration in six of the cluster areas:

- Agribusiness and Natural Resources
- Business and Office
- Construction
- Marketing and Distribution
- Personal Services
- Transportation

Some of the guides were written for use with handicapped students, others were not and, therefore, may need modification in order to make them more appropriate for certain handicapping conditions.

HANDICAPPING CONDITIONS

In order to be consistent with definitions and categories previously established by P. L. 94-142, the handicapping conditions and definitions defined in the regulations (45 CFR 121 a.5(b)) and Vocational Education for the Handicapped: Resource Guide to Federal Regulations (Halloran, et al, 1978:75-78) will be utilized in this guide. In addition, some of the descriptions and characteristics of handicapped students used in the VEH Handbook (Texas Tech University, 1978:39-45) will be adapted for use with this guide.

DEAF

A hearing impairment so severe that it adversely affects student's performances because they find it difficult to process linguistic information with or without hearing aids.

DEAF-BLIND

Simultaneously occuring hearing and visual impairments, which cause such severe communication, developmental, and educational problems for students, that they cannot be accommodated in special education programs solely for deaf or blind students.

HARD OF HEARING

A permanent or fluctuating hearing impairment, which adversely affects students' educational performances but which is not included under the definition of "deaf" in this list.

MENTALLY RETARDED

Significantly subaverage general intellectual functioning existing simultaneously with deficits in adaptive behavior, manifested during the development period, and adversely affecting a student's educational performance.

MULTIHANDICAPPED

Simultaneously occurring impairments, such as mentally retarded-blind, or mentally retarded-orthopedically impaired, which cause such severe educational problems for students that they cannot be accommodated in special education programs for only one of the impairments. This term does not include deaf-blind students.

ORTHOPEDICALLY IMPAIRED

A severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (clubfoot, absence of some member, etc.), and impairments from other causes (cerebral palsy, amputations, and fractures or burns which cause contractures).

OTHER HEALTH IMPAIRED

Limited strength, vitality, or alertness, due to chronic or acute health problems such as heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, lukemia, or diabetes, which adversely affects a child's educational performance.

SERIOUSLY EMOTIONALLY DISTRUBED

A. A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, and adversely

affecting the child's educational performance:

(1) An inability to learn which cannot be explained by intellectual, sensory, or health factors;
(2) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
(3) Inappropriate behavior or feelings under normal circumstances;
(4) A general pervasive mood of unhappiness or depression; or
(5) A tendency to develop physical symptoms or fears associated with personal or school problems.

B. The term includes students who are schizophrenic or autistic, but excludes students who are socially maladjusted unless it is determined that they are seriously emotionally disturbed.

SPECIFIC LEARNING DISABILITY

A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written; manifesting itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia, but excludes students who have learning problems which primarily result from visual, hearing, or motor handicaps, from mental retardation, or emotional distrubance, or from environmental, cultural, or economic disadvantage.

SPEECH IMPAIRED

A communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, adversely affecting a student's educational performance.

VISUALLY HANDICAPPED

A visual impairment which, even with correction, adversely affects a student's educational performance. This term includes both partially seeing and blind children.

For the purposes of this guide, some of the above handicapping conditions have been combined for simplifying the discussions. For instance, deaf and hard-of-hearing were combined since many of the suggestions applied to both handicaps. For multihandicapped students, including deaf-blind, see the appropriate section for each specific handicapping condition.

DEAF AND HARD-OF-HEARING

Deaf--students whose hearing is impaired to the degree that they have problems understanding auditory information with or without a hearing aid or device.

Hard-of-Hearing--students with a permanent or varying hearing problem who are not included under the definition of deaf.

DEAF AND HARD-OF-HEARING STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Difficulty in following oral directions
- Talks too loudly or too softly
- Gives wrong answers due to not hearing questions
- Hyperactive
- Omits words or sounds when speaking
- Appears to daydream or be preoccupied due to poor hearing
- Has very poor speaking and reading vocabulary skills

SUGGESTIONS FOR TEACHING DEAF AND HARD-OF-HEARING STUDENTS:

Although teaching students who are deaf or hard-of-hearing is not very different from the way students without this handicap are taught, the following guidelines are listed. According to Weisgerber (1978:76), the teacher should:

- Keep within close range when speaking to the student.
- Always face the student when speaking.
- Check that the student is paying attention (not just listening).
- Use many visual aids and supplementary written materials.
- Write on the board without speaking, then turn back to the class and speak.
- Articulate clearly and at a normal speed.
- Speak in a natural tone of voice.
- Stand still when talking.
- Provide outlines and vocabulary lists for any complicated topic being discussed.
- Rephrase sentences if the student does not seem to understand.
- Seat the student advantageously for group discussons.

Since many deaf students also display speech impairments, it is

suggested that the teacher should:

- Look at the student when the student is talking.
- Wait until the student is through talking, rather than interrupt and try to finish for the pupil.
- Ensure a climate of acceptance without ridicule.
- Encourage speech.
- Make lists of words the pupil has difficulty saying but which are important for the vocational area.
- Control facial expressions and avoid displaying disturbance at the student's speech.

Hearing impaired students (especially the deaf) also frequently have learning problems. Phelps and Lutz (1977:303) have suggested the following techniques to facilitate learning:

- Captioned films, charts, overhead transparencies and other visual materials should be used extensively.
- Written and simplified transcripts of cassette or audio taped materials can be prepared.
- Arrange for an in-class tutor (deaf interpreter) to work with deaf students and others having problems.

Since hearing aids are often worn by students with hearing impairments, several points should be stressed concerning teacher instructional methods to use for students wearing them. Weisgerber (1987:71) suggests:

- The speaker should stand close to the student. Hearing aids have a limited range of pickup.
- Nonauditory cues, such as hand gestures and facial expressions should be used to emphasize the spoken content of the message.
- Extraneous background noises should be controlled and diminished as much as possible; noise is the archenemy of hearing aid users because the hearing aid amplifies sounds indiscriminately.

Because hearing aids amplify sound, the noise level in the classroom should be lowered as much as possible. However, the hearing impaired student may be able to tolerate general shop noise better than most students while work activities are underway (Weisgerber, 1978:76).

Some deaf students only use manual communication, or "talking" with their hands, and may or may not read lips well. In this case, the

student may have an interpreter to sign for communication during classes. This interpreter might therefore be able to act as an aid in helping to give individual attention to the deaf student in a regular classroom if needed.

STUDENT EVALUATION:

When evaluating the progress of a hearing impaired student, the following suggestions might be appropriate:

- Make sure the student understands the directions. Give the directions in written form or have them signed if the student uses manual communication and has an interpreter in the classroom.
- If there is a time limit involved be sure the student is aware of it.
- Since many hearing-impaired students have poor language skills, structure the written test with as low a vocabulary level as possible.

MODIFICATIONS FOR THE DEAF:

Few, if any, modifications are usually needed for deaf or hard-of-hearing students in regular classrooms or occupational classes. The same equipment and tools used by the regular students will generally be sufficient. Three suggestions for aiding hearing impaired students were listed by Weisgerber (1978:76):

- The buddy system. A buddy is a classmate who can help the communication impaired student with directions missed or with what is happening (especially during group discussions).
- Duplicate notetaking. A classmate can help the hearing impaired student by making a duplicate copy of the day's notes. This can be accomplished easily with carbon paper. The hearing impaired student can then attend to other visual details and cues that would be missed. Having an extra copy of the day's notes is a safeguard against the student missing out on the lesson. Duplicate notetaking also increases the interaction between the communication impaired student and other students.

- Temporary helpers. Also helpful are tutors, interpreters, and counselors. If these services are needed and the school cannot provide them, special vocational education funds should be requested. If these are unavailable the department of rehabilitation's local office can be contacted.

Weisgerber (1978:75) also suggested that the following special equipment be available:

- Warning lights--A flashing light can be used to indicate danger or emergencies. Substituting lights for bells or buzzers is a simple adaptation improving both the safety and functional performance of the communication impaired workers.

- Telephone adapters--Special earpiece attachments are available for use with hearing aids, as are handsets with separate volume controls. A device called Visual Communication (VisCom) has been developed that converts Touch Tone telephone signals into lights on a visual display, thus allowing code-like communication linkages between persons who are totally deaf.

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

Appleby, Judith A. Training Programs and Placement Services: Vocational Training and Placement of the Severely Handicapped. Salt Lake City, Utah: Olympus Publishing Company, 1978.

This is a resource directory consisting of 152 summary descriptions of vocational training programs and placement services for severely handicapped persons in the United States.

Bender, M., Valletutte, P., and Bender, R. Teaching the Moderately and Severely Handicapped: Curriculum Objectives, Strategies, and Activities. Volume I, II, and III. Baltimore, Maryland: University Park Press, 1976.

Fraenkel, William A. How to Get A Job: A Handy Guide for Jobseekers. Washington, D. C.: The President's Committee on Employment of the Handicapped, 1977.

See also Webster, John D. Teacher's Manual for How to Get A Job.

The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091 Toll free number: 1-800-336-3728

Publishes a wide range of instructional methods and materials designed or adapted for use with handicapped or gifted children.

_____. The President's Committee on Employment of the Handicapped. Washington, D. C.: n.d. Bibliography of Secondary Materials for Teaching Handicapped Students.

Tindall, Lloyd W., Lambert, Robert H., Gugerty, John, Dougherty, Barbara, and Strey, Geraldine. A Bibliography of Materials for Handicapped and Special Education. Madison, Wisconsin: Wisconsin Vocational Studies Center, University of Wisconsin, 1978.

Webster, John D. Teacher's Manual to accompany How to Get A Job. Washington, D. C.: The President's Committee on Employment of the Handicapped, 1976

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Dahl, Peter R., Appleby, Judith A., and Lipe, Dewey. Mainstreaming Guidebook for Vocational Educators Teaching the Handicapped. Salt Lake City, Utah: Olympus Publishing Company, 1978.

Davis, Sharon, and Ward, Michael. Vocational Education for Handicapped Students: A Guide for Policy Development. Reston, Virginia: The Council for Exceptional Children, 1978.

Cook, Paul F., Dahl, Peter R., and Gayle, Margaret Ann. Vocational Training and Placement of the Severely Handicapped. Salt Lake City, Utah: Olympus Publishing Comoany, 1978.

Halloran, William, Foley, Theodore, Razeghi, Jane Ann, and Hull, Marc. Vocational Education for the Handicapped: Resource Guide to Federal Regulations. Austin, Texas: Texas Regional Resource Center, 1978.

Maloney, Patricia. Mainstreaming the Handicapped in Vocational Education: Serving the Communication Impaired. Palo Alto, California: American Institute for Research, 1977.

Phelps, L. A., and Lutz, R. J. Career Exploration and Preparation for the Special Needs Learner. Boston, Massachusetts: Allyn and Bacon, 1977, sections reprinted with permission from publisher.

Szoke, C. O., and Vest, S. To Serve Those Who are Handicapped. Springfield, Illinois: Department of Adult, Vocational, and Technical Education, Illinois Office of Education, 1975.

Texas Tech University. Handbook for Vocational Education for the Handicapped. Lubbock, Texas: Home Economics Instructional Materials Center, Texas Tech University, 1978.

Weisberger, Robert. Vocational Education: Teaching the Handicapped in Regular Classes. Reston, Virginia: The Council for Exceptional Children, 1978.

MENTALLY RETARDED

Educable Mentally Retarded (EMR)--students who have a slower rate of academic achievement than peer age group.

Trainable Mentally Retarded (TMR)--students who respond more slowly to education and training than the EMR, and whose rate of development is approximately one-half the normal rate.

EDUCABLE MENTALLY RETARDED STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Impulsive behavior
- Immature behavior
- Immaturity in speech
- Poor coordination
- Easy to distract
- Short memory and attention span

TRAINABLE MENTALLY RETARDED STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Lack of self-care skills
- Poor social adjustment
- Need for guidance and supervision
- Inability to be self-sufficient in personal care

SUGGESTIONS FOR TEACHING MENTALLY RETARDED STUDENTS:

The special education teacher is the most important resource available to regular teachers who have a mentally retarded student in their class. He/She can assist the teacher in planning and carrying out a training program, helping teachers understand each student's individual learning capabilities, and what modifications need to be made in the regular or vocational curriculum.

Smith (1977:31) recommended the following points to keep in mind:

- In planning instruction, try to include lessons which will help the student develop problem solving skills. He needs to learn that a tool can be used for several different types of operations, and that a process can apply to different situations.

- Include lessons on safety which emphasize careful use of power tools, general shop safety, and proper use of safety equipment such as gloves, goggles, safety boots, etc.

In teaching the mentally handicapped student, instruction should be (Smith, 1977:32):

- Organized. Look over your instructional plan. Are steps of instruction logical and do they clearly follow each other? Is later instruction based on material already learned?
- Specific. The student needs to know exactly what he must do. He may not be able to see obvious connections unless they are pointed out.
- Visual. Whenever possible demonstrate what must be done. Use films, slides, drawings, and simple charts and diagrams.
- Spaced in small steps. Instruction should be presented in small increments with time for practice.
- Repeated and checked. Instruction should be repeated at spaced intervals. Check often to see if the student can demonstrate that he understands.
- Overlearned. Allow time for overlearning. Check periodically to see if the student remembers important operations, and encourage him to practice them.
- Reinforced. Praise the student for work accomplished, no matter how small the task. Make it clear that new assignments are the result of satisfactory performance. "You've done a good job of soldering these wires, how would you like to begin soldering resistors to terminals?"

STUDENT EVALUATION:

In evaluating the progress of the mentally handicapped student, it must be remembered that mentally retarded students do not usually do well on tests. Instead of involving them in testing situations geared to the rest of the class, it may be more beneficial to check their work regularly, keeping a progress record, and listing problems that have been encountered. When tests are given, however, the following techniques are recommended by Phelps and Lutz (1977:326):

- Use vocabulary and language that is extremely simple and concise.

- Make the sentences or test items as short as possible.
- Verify that the test information to be read is at or below the learner's reading level in terms of difficulty.
- Use nonverbal response scales whenever possible:

- Permit oral presentation of questions to provide simplification and clarification. This can be done on either an individual or group basis.
- Permit testing to take place in short sessions over several days.
- Provide simple directions and several examples for responding.
- Use only concrete, meaningful terms.
- Repeat directions or other essential information until over-learning occurs.
- Use some modes for responding other than writing whenever possible.

MODIFICATIONS FOR THE MENTALLY RETARDED:

Basically, no extensive changes are needed for mentally retarded students in the classroom. However, the teacher will want to give special attention to the student's work area, tool storage area, and locker space. The student should have a clearly designated work area. This work area should be simple and uncluttered because a cluttered area might be confusing to the mildly retarded student who learns best by working on one problem or project at a time (Weisgerber, 1978:61). Other suggestions include (Weisgerber, 1978:60):

- Use regular students as tutors or role models to demonstrate assigned work tasks and expected work habits and behavior.
- Visual presentation through audiovisual aids are more effective than talking or explaining a task to retarded students.
- Students can review a film or videotape often, practicing until they can do a task independently.

- Films have the advantage of being repetitious when necessary and can be geared to the student's level of comprehension.
- Cassettes can be used for step by step instruction and can be played repeatedly by the student--providing reinforcement and encouraging the student to be more independent.

Other methods for modifying instruction for the mentally handicapped student include:

- Reduce the rate of presentation
- Alter content of material in volume
- Alter content of material in complexity
- Alter emphasis of material to match immediate interests
- Replace abstract illustrations with concrete ones
- Expand background materials to provide greater basis for understanding
- Replace looking and listening approach with doing and reporting
- Present material in a multisensory manner
- Utilize novel methods of introducing materials
- Utilize pretest activities for specific pupil information

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

American Academy on Mental Retardation
916 64th Avenue East
Tacoma, Washington 98424 Telephone: 206-922-5859

American Association on Mental Deficiency
5201 Connecticut Avenue, N. W.
Washington, D. C. 20015 Telephone: 202-686-5400

American Association of Psychiatric Services for Children
1701 18th Street N. W.
Washington, D. C. 20009 Telephone: 202-332-7071

Center for Innovation in Teaching the Handicapped
University of Indiana
2805 E. Tenth Street
Bloomington, Indiana 47401 Telephone: 812-337-5847

Curriculum Research and Development Center in Mental Retardation
Yeshiva University
55 Fifth Avenue
Room 1409
New York, New York 10003 Telephone: 212-255-5600 ext. 441

Joseph P. Kennedy, Jr. Foundation
1701 K. Street N. W.
Suite 205
Washington, D. C. 20006 Telephone: 202-331-1731

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Birch, J. W. Mainstreaming Educable Mentally Retarded Children in Regular Classes. Reston, Virginia: The Council for Exceptional Children, 1974.

Frankel, William A. Preparing for Work--A Guide for Special Class Teachers, School Guidance Counselors, Work-Study Specialists, Families of Mentally Retarded Young People, Mentally Retarded Young People Themselves. Washington, D. C.: The President's Committee on Employment of the Handicapped, 1978.

_____. A Guide to Job Placement of Mentally Retarded Workers. Washington, D. C.: The President's Committee on Employment of the Handicapped.

Phelps, L. A., and Lutz, R. J. Career Exploration and Preparation for the Special Needs Learner. Boston, Massachusetts: Allyn and Bacon, 1977, sections reprinted with permission from publisher.

Smith, Claudette. Mainstreaming the Handicapped in Vocational Education: Serving the Mentally Retarded. Palo Alto, California: Institute for Research, 1977.

ORTHOPEDICALLY IMPAIRED

Students with a deformity of the body structure which may exist at birth, be caused by disease, or be the result of amputation. Students in this group may have handicaps resulting from loss of limbs or portions of limbs which restricts mobility. (Includes clubfoot, poliomyelitis, and cerebral palsy).

Palsied--students with a motor disorder appearing before the age of three which is caused by damage to the brain before, during, or shortly after birth.

PALSIED STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

. Lacks control of voluntary muscles in

. . arms
. . legs
. . tongue
. . eyes
. . body movement

Some cerebral palsied persons may exhibit facial grimaces, involuntary movements, drooling, or an awkward gait. Cerebral palsy is not a uniform disease, but rather a syndrome which not only may affect movement and posture, but also may be associated with language problems, seizures, mental retardation, and with disorders of vision, hearing, perception, and speech. Because of the diversity of the types of impairments which may be present in persons who have cerebral palsy, and the various degrees of severity of these impairments, it is virtually impossible to generalize about the "typical" effects of this syndrome. Cerebral palsy may range in its effects from mild, involving only a slight awkwardness of gait, to severe, wherein major dysfunctions in the person's abilities to control movement, to communicate, and to learn are present.

The primary symptom of cerebral palsy is a lack of motor control due to damage to brain tissue. The primary cause of the damage is an insuf-

ficient supply of oxygen to the brain (anoxia), usually before, during, or immediately after birth.

Teachers might need to be aware of the fact that a proportion of persons who are cerebral palsied do have some level of mental retardation. (Foster, 1977:43).

Muscular Dystrophy--students who have a disease of the nervous system and muscles which results in a progressive weakening and wasting of the skeletal and voluntary muscles.

STUDENTS WITH MUSCULAR DYSTROPHY MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Weakening muscles
- Lack of muscle control

Muscular dystrophy is the general designation for a group of chronic diseases whose most prominent characteristic is the progressive degeneration of the skeletal or voluntary musculature. They are for the most part hereditary conditions although spontaneous occurrence, as the result of genetic mutation, is not uncommon... There are variations in the age of onset, in the muscle groups first affected, and in the rate of progression. As a rule, it can be said that the earlier clinical symptoms appear, the more rapid is the progression (Muscular Dystrophy Association, 1975:15).

Paralysis--students with a loss of voluntary action caused by: disease, accident, hemorrhage, stroke, tumor, or swallowing poison.

STUDENTS WITH PARALYSIS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Spasms
- Jerking of involuntary muscles
- Loss of muscle power and function
- Emotional problems

Spina Bifida--students with an imperfectly formed central nervous system, occurring during the fourth and sixth week or pregnancy, in which the spine fails to develop properly.

STUDENTS WITH SPINA BIFIDA MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Varying degrees of paralysis
- Lack of bowel and bladder control
- Lack of sensation in the lower extremities

Multiple Sclerosis--students with a nervous system disease which results when the insulation (myelin tissue) around the nerve fibers of the brain and spinal cord are destroyed, frequently resulting in mobility impairment.

MULTIPLE SCLEROSIS STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Paralysis of trunk, hands, and/or feet
- Weakness or loss of control of bladder and bowel
- Jerky movement of the eyes
- Dizziness

SUGGESTIONS FOR TEACHING ORTHOPEDICALLY IMPAIRED STUDENTS:

The importance of a team approach between the teacher and the special educator cannot be overly emphasized. Through the team approach, the teacher and special educator can better utilize a workable plan for determining goals, developing a plan of instruction, and dealing with problems that might arise. Ultimately, it is the attitude of the teacher that may mean the difference between success and failure in the exploration activities provided for orthopedically impaired students.

Many teachers worry about accidents involving handicapped students. Studies have shown, however, that this is a needless concern. According to Asher and Asher (1976:31), in 1968 and again in 1973, E. I. duPont de Nemours and Company, one of America's largest employers, studied more than 2,000 of its employees and found compensation costs and lost time due to

injuries no higher for the handicapped than for the non-impaired workers.

Basically, the content of the exploration curriculum will not need to be changed for the orthopedically handicapped student. The teacher should remember, however, that the content should be job-related, appropriate to the physical limitations of the student, structured to meet specific task competencies, and coordinated with the student's own career aspirations (Weisgerber, 1977:22).

In some cases, teachers may have difficulty in communicating with orthopedically impaired students due to a certain dysfunction in speech, such as some students with cerebral palsy demonstrate. If the teacher does not understand what the student with such a severe speech problem is saying, he/she should ask the student to repeat himself/herself, several times if necessary. If the teacher still does not understand, he/she should ask the student to try to say the same thing in different words. The student may also spell out, write, or type what he/she wishes to communicate. The process may require a great deal of patience on the part of both the teacher and the student, but it is essential.

Encourage a student with a manipulative impairment to learn to type; allow the student to type tests, homework, and any extensive written work required during the class period. If the noise is distracting to other students, the student can type in another designated setting. Several mechanical devices and techniques have been developed that can aid individuals with cerebral palsy or other disabilities affecting the upper extremities to type adequately. See the section on Modifications for a review of these devices.

The buddy system, previously suggested for other handicapping

conditions, also works well with students who are orthopedically handicapped. This can be done by arranging, or having the student arrange, to have notetaking services whereby a classmate makes a carbon copy of classroom lecture notes and assignments.

Tape recorders are another aid for students who have difficulty in writing. These, along with typewriters, should be provided for the students in order to give them an opportunity to type or tape record responses. However, the teacher should make sure that the student's impairment, such as limited use of hands, etc., does not also limit access to the use of tape recorders and typewriters.

Other techniques for teaching orthopedically handicapped students suggested by Foster, et al (1977:204-205):

- Taping class lectures is not an adequate substitute for notetaking. In studying for a test, reviewing a tape of the entire lecture is extremely time-consuming.
- Permit a student for whom transporting books and supplies is a burden to have a duplicate set of textbooks or other supplies, one to be stored in the classroom and the other kept at home.
- Be familiar with the many special devices (oversized pencil or special pencil holder, easel to hold books, page turner for books, special typewriter plate) that can assist the student to compensate for lack of manipulative ability.
- Demonstrate a procedure, then let the student do it. Don't be overly concerned if the student makes a mistake; convert that mistake into a learning experience.
- Allow students with manipulative impairments ample time to complete a task involving manual dexterity.
- Allow early dismissal from class to allow ample time and free access to the next class.

In order for the exploration teacher to assist the student in making realistic choices, he/she must assure that the student in fact understands what preparation is necessary for various careers and what

the day-to-day activities of these careers are like. The student must have an opportunity to actually test out, in actual or simulated work settings, his/her own skills, limitations and interests. (Foster, et al, 1977:49).

MODIFICATIONS FOR THE ORTHOPEDICALLY HANDICAPPED STUDENT:

While certain modifications may be necessary for the orthopedically impaired student, unnecessary adjustments are to be avoided. (Foster, et al, 1977:201). However, several important considerations of a general nature as outlined by Szoke and Vest (1975) include:

- Absence of obstructions, ample space between aisles and around power equipment, storage areas for materials and supplies for students in wheelchairs.
- Nonskid floor to facilitate handling of crutches and wheelchairs.
- Alterations in height of work benches, storage cabinets, etc. Typically these have to be lowered and recessed to accommodate students in wheelchairs.
- Simple handles rather than knobs on cabinets for amputees with artificial limbs or other devices.
- Mobile demonstration table that can be moved from student to student.
- Sinks and water controls should be accessible to students in wheelchairs. Batwing faucets that require minimal manual dexterity for manipulation and gooseneck spigots that allow for greater ease of operation by providing ample room between the sink and the spigot are especially helpful for those students with upper extremity orthopedic involvement.

An alternative to changing the height of work benches would be to build a raised ramp to bring the student to the height of the equipment. Be sure the ramp is cogged and the student locks the wheelchair to prevent rolling. Also, lapboards could be used as work stations for some activities.

Three pieces of standard audiovisual equipment are particularly useful in classes serving students with mobility or manipulative impairments.

1. The overhead projector is recommended since the image projected is often larger than that which would be visible on a chalkboard. This larger image also may be beneficial to some partially sighted students. Students can also prepare their work on materials that can be projected by this device so that an alternative to chalk board work is provided.
2. A videotape closed circuit television arrangement with large screen monitors allows for easy viewing by students throughout the room. It also allows for the projection and storage of video tapes which teachers can use again and students can review.
3. For demonstrations, an overhead pivoting mirror installed in a vertical position above the demonstration table allows students to view demonstrations from their seats, without crowding about the demonstration table. Such an arrangement also helps non-disabled students to view demonstrations and provides for efficient use of class time since no time need be lost in leaving and returning to seats.

The following modifications of typewriters which might be needed by students with manipulative impairments were suggested by Foster et al, (1977:203-204):

- Use of electric typewriters require 1/10th to 1/15th the finger pressure needed to operate a manual typewriter and reduce energy expenditure by 95%. Sometimes adjustment of touch control is all that is needed to give some disabled students control over the keys..

- A Dvorak typewriter can be obtained with a rearranged alphabet on the keyboard (for one-handed typing).
- Place a box in front of the typewriter, so that the cerebral palsied student may rest hands on box to achieve better control.
- An arm rest can be purchased for an IBM Selectric. The typewriter is placed into the arm rest frame which gives the cerebral palsied student a rest surface in front of, or at the same height as, the typewriter.
- A plate for the cerebral palsied student can be purchased and attached to the IBM Selectric typewriter. This plate is easily secured to the typewriter by drilling two holes on the frame of the typewriter and screwing the plate in place. The student then rests his/her fingers on the plate and slides up to the hole of the key she/he wishes to depress.
- The Remington Electric typewriter can be purchased with a permanent plate over the keys to help the cerebral palsied student to have better control over the keyboard.

STUDENT EVALUATION:

Basically, orthopedically impaired students are evaluated in much the same manner as other students in the class. However, on written tests it may be necessary to provide more spaces for responding to questions if the individual exhibits poor fine motor coordination. If the test is timed, the student may need more time to complete it. Some students may not be able to write, and oral testing may be used rather than requiring written responses. Shorter testing sessions and longer time necessary for the assessment of skills may prolong instructional objectives.

When performance testing, the teacher should make sure that the needed modifications are made on equipment, tools, materials, and work areas. The arrangement of materials is very important in a testing situation due to the limited mobility of some of the students. If these modifications are not made, it could limit the student's performance.

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

American Academy for Cerebral Palsy
1255 New Hampshire Avenue, N. W.
Washington, D. C. 20036 Telephone: 202-659-8251

Bureau of Education for the Handicapped
USOE Department of HEW
400 Maryland Avenue S. W.
Washington, D. C. Telephone: 202-245-2709

Cystic Fibrosis Foundation
3379 Peachtree Road, N. E.
Atlanta, Georgia 30326 Telephone: 404-262-1100

Educational and Vocational Counseling for Young Adults with Cystic Fibrosis
Good Business--Hire Young Adults with Cystic Fibrosis
How Do I Get a Job? What Kind of Work Should I Do?

Easter Seal Society for Crippled Children and Adults of Texas
"Easter Seal Action Line"
24 hour, toll free number: 1-800-492-5555

Among the services available through the Action Line are speech, physical and occupational therapies, evaluations, and purchase of needed orthopedic equipment.

Muscular Dystrophy Association
810 Seventh Avenue
New York, New York 10010 Telephone: 212-586-0808

For information write the Director of Patient and Community at the above address.

Muscular Dystrophy Association. Around the Clock Aids for the Child with Muscular Dystrophy. New York, New York: Muscular Dystrophy Association, 1975.

_____. Patient and Community Services. New York, New York: Muscular Dystrophy Association, 1975.

Muscular Dystrophy Association
John T. Peck, Regional Director
12011 Coit Road, Suite 117
Dallas, Texas 75230 Telephone: 214-661-3297

National Foundation/March of Dimes
1275 Mamaroneck Avenue
White Plains, New York 10605 Telephone: 914-428-7100

The National Foundation-March of Dimes
Dennis Gilmore, Regional Director
5415 Maple Avenue, Suite 310
Dallas, Texas 75235 Telephone: 214-630-1470

National Multiple Sclerosis Society
205 E. 42nd Street
New York, New York 10017 Telephone: 212-532-3060

National Paraplegia Society
333 N. Michigan Avenue
Chicago, Illinois 60601 Telephone: 312-346-4779

Richardson, Nina K. Type with One Hand (2nd edition). Cincinnati, Ohio: South-Western Publishing Company, n.d.

Spina Bifida Association of America
209 Shiloh Drive
Madison, Wisconsin 53705 Telephone: 608-836-8969

Typewriting Institute for the Handicapped
3109 West August Avenue
Phoenix, Arizona 85201

A source of special typing equipment: Distributes the Dvorak one-hand typewriter.

United Cerebral Palsy
66 E. 34th Street
New York, New York 10016 Telephone: 212-889-6655

United Cerebral Palsy Association of Texas
Thurma Burton, Executive Director
201 San Jacinto Building
Austin, Texas 78701 Telephone: 512-477-6615

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Foster, June C., Szoke, Claire O., Kapisovsky, Peggy, and Kriger, Leslie. Guidance, Counseling, and Support Services for High School Students with Physical Disabilities: Visual, Hearing, Orthopedic, Neuromuscular, Epilepsy, Chronic Health Conditions. Cambridge, Massachusetts: Technical Education Research Center, 1977.

Szoke, C. O., and Vest, S. To Serve Those Who are Handicapped. Springfield, Illinois: Department of Adult, Vocational and Technical Education, Illinois Office of Education, 1975.

Weisgerber, Robert. Mainstreaming the Handicapped in Vocational Education: Serving the Orthopedically Handicapped. Palo Alto, California: American Institutes for Research, 1977.

OTHER HEALTH IMPAIRED

Student exhibits limited strength, energy, or alertness due to chronic or severe health problems. This includes heart conditions, tuberculosis, rheumatic fever, diabetes, asthma, sickle cell anemia, hemophilia, and epilepsy.

OTHER HEALTH IMPAIRED STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Lack of energy
- Lack of alertness
- Inability to progress at normal rate
- Consistent serious health problems
- Frequent absenteeism
- Physical problems such as underweight

It would be impossible to list all of the conditions that could come under the heading "other health impaired". This guide attempts to list only the most commonly occurring or familiar impairments that teachers may encounter among students in the public school.

Cystic Fibrosis--students with a disorder in which the secretions of certain glands are abnormal.

STUDENTS WITH CYSTIC FIBROSIS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Complications in breathing
- Frustration
- Excessively salty perspiration
- Heat exhaustion
- Self-consciousness
- Chronic cough
- Small stature
- Immature appearance

Cystic fibrosis is a genetic disorder affecting secretions of certain glands, including mucous glands. Abnormal mucous causes respiratory problems by blocking the breathing passages in the lungs. In order to control the respiratory condition and to prevent pulmonary infection, the individual follows a treatment regime to prevent the accumulation of mucous in the

lungs. Cystic fibrosis can range from mild to severe in its effects. Life expectancy and tolerance for physical activity may vary considerably from person to person (Foster, et al, 1977:65-66).

Teachers must be made aware of the fact that the prospect of a shortened life span, along with recurrent complications, may be a source of great anxiety and/or depression for the student. Sometimes a student may exhibit a "what's the use?" attitude regarding his/her career and/or future plans. The teacher who recognizes this and is supportive of the student and displays a positive attitude toward the student can be a great asset in helping the student plan for and cope with the future.

The career options of students with cystic fibrosis will vary considerably from person to person, depending on the severity of his/her condition. Some students may have to avoid careers that (Foster, et al, 1977-68):

- Involve heavy physical labor
- Are excessively sedentary
- Necessitate exposure to dust, fumes, and extremes in temperatures
- Involve full-time work only

It should be noted, however, that some persons with cystic fibrosis have been able to work at jobs with these characteristics. It is advisable to confer with the physician when helping students plan careers.

Epilepsy--students with improper functioning of brain cells due to temporary buildups of excessive electrical charges in some nerve cells in the brain that cause the brain to lose control (partially or entirely) of the muscles of the body, consciousness, or senses for a period of time.

Some of the causes include:

- Brain damage from prenatal or birth injuries
- Brain damage from accidents
- Infectious diseases, tumors, or other disorders
- Unknown causes

STUDENTS WITH EPILEPSY MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Staring spells ("daydreaming")
- Tic-like movements
- Rhythmic movements of the head
- Purposeless sounds and body movements
- Head dropping
- Lack of response
- Eyes rolling upward
- Chewing and swallowing movements

SUGGESTIONS FOR TEACHING OTHER HEALTH IMPAIRED STUDENTS:

In general, treat the child with epilepsy as you would any other student. This is essential if the student is to develop a healthy personality and become a normal, productive member of society. According to the Epilepsy Foundation of America (1974), the teacher should remember:

- Do not pamper the child for fear he will have a seizure.
- Do not let him/her "rule the roost."
- Do not fear or pity him/her.

The Epilepsy Foundation of America estimates that one out of fifty Americans have epilepsy in one form or another. The most common form--"grand mal"--is the most striking (and sometimes alarming) in a work setting or social situation. At present, about eighty percent of persons with epilepsy can achieve full or partial control of their seizures with medications. Another equally important "medication" is understanding and acceptance. Some people have diabetes. Some have vision difficulties and need glasses. Some have hearing loss. And some have epilepsy.

COMMON TYPES OF SEIZURES:

1. Grand Mal: Violet shaking of the entire body accompanied by temporary loss of consciousness. Usually lasts about 2 to 5 minutes. May occur as often as one or more times a day, or as infrequently as once a year or more.

2. Petit Mal: A simple staring spell (often mistaken for daydreaming). Usually lasts less than a minute, often only several seconds. May occur repeatedly in one hour.

3. Psychomotor: Inappropriate or purposeless behavior with subsequent amnesia regarding the episode. Usually lasts 2 to 5 minutes and may occur one or more times, weekly, monthly, or annually.

FIRST AID FOR GRAND MAL EPILEPSY:

1. Do not try to restrain the person. There is nothing you can do to stop a seizure once it has begun. It must run its course.

2. Clear the area around him/her so that he does not injure himself/herself on hard or sharp objects. Try not to interfere with his movements in any way.

3. Don't force anything between his/her teeth. If his/her mouth is already open, you might place a soft object like a handkerchief between his/her side teeth.

4. It isn't generally necessary to call a doctor unless the attack is followed almost immediately by another major seizure, or if the seizure lasts more than about ten minutes.

5. When the seizure is over, let the person rest if he/she needs to.

6. If a plant, company, or school has a nurse or physician, they should be notified or consulted.

Diabetes--students having a metabolic condition wherein the insulin produced by the pancreas is insufficient to properly use the sugar (glucose) and starches present in the food that is eaten.

Diabetes is not an infectious disease. It results from failure of the pancreas to make a sufficient amount of insulin. Food cannot be used properly. Diabetes currently cannot be cured but can be controlled. Treatment usually consists of daily injections of insulin and a prescribed food plan. Teachers need to be aware of the fact that students with diabetes can participate in all school activities and should not be considered different from other students.

INSULIN REACTIONS:

Insulin reactions occur when the amount of sugar in the blood is too low. This is caused by an imbalance of insulin, too much exercise, or too little food. "Reactions" may occur shortly before meals or immediately after strenuous exercise. Many diabetics take extra food before active periods. If possible, the daily school schedule should be arranged so that strenuous exercise follows, rather than precedes, mealtime.

WARNING SIGNS OF INSULIN REACTIONS:

- Mood change
- Irritable crying
- Confusion
- Inappropriate responses
- Nausea
- Headache
- Perspiring
- Pale
- Shaky
- Nervous
- Drowsiness
- Fatigue

The student may recognize his/her own warning signs. However, teachers should be alert to the warning signs or reactions and the student should be encouraged to recognize and report them.

At the first warning signs, the American Diabetes Association reccommends that one should give sugar immediately in one of the following forms:

a. Sugar - 5 small cubes, 2 packets, or 2 teaspoons
b. Fruit juice - 1/2 to 2/3 cup
c. Carbonated beverage - (not diet or sugarless pop) - 6 ounces
d. Candy - 1/4 to 1/3 candy bar

The student experiencing a reaction may need coaxing to eat. If improvement does not occur within 15-20 minutes, repeat the feeding. If the student does not improve after administration of the second feeding containing sugar, the parents or physician should be called. When the student improves, he/she

should then resume normal school activities and the parents advised of the incident. Diabetic coma, a serious complication of the disease, results from uncontrolled diabetes. This does not come on suddenly and generally need not be a concern to school personnel (American Diabetes Association, n d).

Most career avenues will be open to persons with diabetes. The Committee on Employment and Insurance of the American Diabetes Association states that persons who can be treated with diet alone or with diet and oral blood-sugar-lowering agent have no employment restrictions and can pursue both hazardous and nonhazardous jobs. One exception being that persons requiring oral agents should not be commercial pilots. Persons who do require diet and insulin should not pursue potentially hazardous jobs such as working on scaffolding or near heavy moving machinery. They usually will not qualify for driving commercial vehicles engaged in interstate of foreign commerce. Persons with diabetes are capable of performing heavy manual labor, however (American Diabetes Association, 1972:834).

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

American Diabetes Association
North Texas Affiliate
5415 Maple Avenue Suite 216
Dallas, Texas 75235

Center for Sickle Cell Disease (Howard University)
2121 Georgia Avenue N.W.
Washington, D.C. 20059 Telephone: 202-636-7930

Ms. Mary Ann Jones, Program Coordinator
Sickle Cell Anemia Association of Texas
2914 East Rosedale
Fort Worth, Texas 76105 Telephone: 814-531-2793

Cystic Fibrosis Foundation
3379 Peachtree Road, N.E.
Atlanta, Georgia 30326 Telephone: 404-262-1100

Epilepsy Foundation of America
1828 L Street N.W.
Washington, D.C. 20036

"The Employer's Role"
"Answers to the Most Frequent Questions People Ask About Epilepsy"
"Teacher Tips about the Epilepsies"
"Because You are My Friend" (a booklet for elementary students or students with low reading level)

Juvenile Diabetes Foundation
23 E. 26th Street
New York, New York 10010 Telephone: 212-689-7868

Lukemia Society of America
211 East 43rd Street
New York, New York 10017 Telephone: 212-573-8484

National Hemophilia Foundation
25 W. 39th Street
New York, New York 10018 Telephone: 212-869-9740

"The Hemophiliac Child in School"

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American Diabetes Association. "Employment of Diabetics: A Statement of the Committee on Employment and Insurance," Diabetes, 1972, 21 (7), 834-835.

_____. What School Personnel Should Know about the Child with Diabetes. Dallas, Texas: North Texas Affiliate, American Diabetes Association, n.d.

Benson, H. A. "Epilepsy and Employment: Placement Problems and Techniques," American Rehabilitation, 1978, 3 (4), 3-8, 32.

Epilepsy Foundation of America.. Teacher Tips About the Epilepsies. Washington, D.C.: Epilepsy Foundation of America, 1974.

Schlesinger, Laurence E., and Frank, Donald S. Epilepsy on the Way to Work: A Guide for the Rehabilitation Counselor. Washington, D.C.: The Artists and Writer's Syndicate, 1976.

Foster, June C., Szoke, Claire O., Kapisovsky, Peggy M., and Kriger, Leslie S. Guidance, Counseling, and Support Services for High School Students with Physical Disabilities: Visual, Hearing, Orthopedic, Neuromuscular, Epilepsy, Chronic Health Conditions. Cambridge, Massachusetts: Technical Education Research Centers, 1977.

SERIOUSLY EMOTIONALLY DISTURBED

Students with an emotional condition occurring over a long period of time and to such a degree that the students do poorly in school. Students who are schizophrenic or autistic are also included in this category.

SERIOUSLY EMOTIONALLY DISTRUBED STUDENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Lack of ability to learn which cannot be explained by other factors
- Lack of ability to get along with teachers or peers
- Inappropriate behaviors under normal situations
- Tendency to show physical signs or fears related to school or personal problems

Phelps and Lutz (1977:12) identified several other additional characteristics that emotionally disturbed students might exhibit. These include:

- Lack of confidence
- Hyperactive
- Inattentive
- Depressed
- Fearful
- Low frustration tolerance
- Distractable
- Withdrawn
- Conduct problem
- Aggressive
- Impulsive
- Nonconformity
- Phobias

SUGGESTIONS FOR TEACHING EMOTIONALLY DISTURBED STUDENTS:

It is with the emotionally disturbed student that perhaps the greatest need exists for cooperation between special and vocational education personnel. Each emotionally disturbed student is so different from the other that generalizations for handling problems are usually hard to make. The following suggestions concern different kinds of emotional problems,

so not all of the suggestions will be appropriate for all students. The teacher must decide which will be most appropriate for the individual student.

- For students who are withdrawn, develop the student's confidence in him/herself by giving the student recognition and responsibility. Encourage the student's contact with peers. Set a pattern of relaxed calmness in the classroom (Faas, 1970:91-93).

Siegel (1969:55-107) gives the following suggestions:

- For students who are distractible, reduce extraneous stimuli by removing items not needed for the immediate activity. Keep unstructured time to a minimum by distributing materials quickly and occasionally calling attention to the activity at hand. Use variety in activities. Lecture should be used with other activities.

- For the student who has organizational problems, assign a classmate to remind the student of assignments, due dates, etc. Structure the classroom so that routines are set and the student understands the rules, instructions, and procedures.

- When students have problems with abstract thinking, use concrete materials to illustrate abstract concepts.

- For behavioral problems, establish routines to decrease tension and anxiety. Do not let any problem situations snowball--stop unpleasant situations when they begin. Be sure to investigate problems before punishing. Be consistent. Ignoring unacceptable behavior is sometimes appropriate and effective. If the student is easily distractible, he/she might be easily coaxed out of a bad mood, therefore using a weakness to an advantage. Train the student for independent work by being sure the student can complete the initial tasks, thereby assuring success. The tasks should be well-defined and gradually increased in time, level, and complexity. Reinforce independent actions. A negative mental attitude is easily detected, so try to keep a positive attitude when working with these students. A direct appeal to the student may result in improved behavior.

- For students who are socially immature, provide opportunities for socialization, such as group projects or the buddy system. Give specific instructions in social skills, especially related to social skills needed on the job. Improve self-concept through use of praise and activities structured so as to be successful.

STUDENT EVALUATION:

- Prior to testing or assessment take steps to insure that the test situation is nonthreatening to the extent possible.
- Watch the learner closely during the testing to spot potentially disruptive situations.

Phelps and Lutz (1977:328).

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

American Association of Psychiatric Services for Children
1701 18th St. N.W.
Washington, D.C. 20009 Telephone: 202-332-7071

National Association for Mental Health, Inc.
1800 North Kent Street
Arlington, Virginia 22209 Telephone: 703-528-6405

National Society for Autistic Children
Information and Referral Service
306 31st Street
Huntington, West Virginia 25702 Telephone: 304-697-2638

John J. Kavanagh, M. D. Commissioner
Texas Department of Mental Health and Mental Retardation
P. O. Box 12668
Austin, Texas 78711 Telephone: 512-454-3761

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Faas, Larry, A. The Emotionally Disturbed Child: A Book of Readings. Springfield, Illinois: Charles C. Thomas Publishing Company, 1970.

Gardner, William. Children with Learning and Behavior Problems: A Behavior Management Approach. Boston, Massachusetts: Allyn and Bacon, Inc., 1978.

Phelps, L. Allen, and Lutz, Ronald J. Career Exploration and Preparation for the Special Needs Learner. Boston, Massachusetts. Allyn and Bacon, Inc. 1977, sections reprinted with permission of publisher.

Siegel, Ernest. Special Education in the Regular Classroom. New York, New York: The John Day Book Company, 1969.

SPECIFIC LEARNING DISABILITY

Students with a psychological learning disorder that causes the students to have problems understanding spoken or written language. This category includes such conditions as brain injury, dyslexia, and aphasia.

STUDENTS WITH SPECIFIC LEARNING DISABILITY MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Lack of ability to listen or think
- Problems in speaking
- Difficulty in reading, writing, spelling and math
- Perceptual difficulty
- Depression

Aphasia--students with a language loss in some or all aspects of communication caused by damage incurred in certain portions of the brain.

STUDENTS WITH APHASIA MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- May experience difficulty with:
  - talking
  - reading
  - writing
  - understanding
- Changes in feelings, attitudes, and abilities from day to day
- Seems depressed
- Withdraws
- Attention span is limited

SUGGESTIONS FOR TEACHING STUDENTS WITH LEARNING DISABILITIES:

Probably the most effective thing a teacher could do in teaching students with learning disabilities is to provide ways in which to enhance the student's self-esteem. According to Brolin and Kokaska (1979:80), many can function in regular classes if they receive appropriate support services.

In providing exploration activities and career information, the teacher must be aware of the amount of pressure and interpersonal requirements that

many jobs call for. Knowing the student's limitations and the requirements for specific jobs, the teacher can better assist the student in making wise career choices.

Phelps and Lutz (1977:302) recommended the following guidelines for modifying instructional materials for students with learning problems.

- Be sure the language is at an appropriate reading level.
- Keep words and sentences as simple and as short as possible.
- Include as many visual (drawings, pictures, illustrations) as possible.
- Provide verbal reinforcement for the material in the form of individualized attention.
- Be sure the examples used are concrete and meaningful for the learner.
- Make extensive use of audio-visual aids.
- Prepare audio cassette recordings of important printed materials.
- Modify materials (such as workbooks) so that students can respond by drawing illustrations or recording on cassette tape.

STUDENT EVALUATION:

In evaluating the progress of the learning disabled in a career exploration class, the teacher should: (Phelps and Lutz, 1977:327):

- Use modes for responding that do not involve extensive writing or speaking.
- Have instruments and evaluation procedures reviewed by a learning disabilities consultant prior to use.
- Watch the student carefully for cues that difficulty is being encountered.

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

Association for Children with Learning Disabilities
5225 Grace Street
Pittsburg, Pennsylvania 15236 Telephone: 412-881-1191

Council for Exceptional Children
Information Services
1920 Association Drive
Reston, Virginia 22091 Telephone: 703-620-3660

Texas Council for Exceptional Children
Kathleen Varner, Executive Director
4015 Normandy
Dallas, Texas 75205 Telephone: 214-521-0070

Texas Association for Children with Learning Disabilities
Virginia Stubbs
1011 West 31st Street
Austin, Texas 78705 Telephone: 512-458-8334

BIBLIOGRAPHY

Brolin, Donn E., Kokaska, Charles J. Career Education for Handicapped Children and Youth. Columbus, Ohio: Charles E. Merrill Publishing Company, 1979.

Phelps, L. Allen, and Lutz, Ronald J. Career Exploration and Preparation for the Special Needs Learner. Boston, Mass: Allyn and Bacon, 1977. sections reprinted with permission of publisher.

SPEECH IMPAIRED

Students with a speaking problem that causes them to do poorly in school. Included in this category are stuttering and voice or language impairments.

STUDENTS WITH SPEECH IMPAIRMENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Articulation problems, such as distortions, omissions, or substitutions of sounds.
- Voice problems, such as very nasal or hoarse.
- Fluency problems, such as stuttering.
- The speech problem may exist by itself or accompany a larger problem, such as cleft palate, hearing loss, or cerebral palsy.

SUGGESTIONS FOR TEACHING SPEECH IMPAIRED STUDENTS:

- Make speech as pleasant as possible by being a good listener and not calling attention to the student's speech.
- Support the efforts of the speech therapist if you are given suggestions for working with a particular student.
- A student with a hoarse voice may be on a temporary therapy schedule which includes limited or no speech. This may be to reduce problems in the vocal cords in an effort to avoid surgery.
- Give special consideration to oral recitation for the student who stutters or who has any severe speech problem that makes him/her very difficult for others to understand.
- The teacher should not tell the student who stutters to stop and start over, to talk faster or slower, to whisper, or any other device to try to eliminate stuttering.
- The teacher should never correct the student's speech unless it is part of the speech therapy program.
- Never make fun of a student with a speech problem.
- Make the classroom as free from tension as possible.

- Listen attentively to students with speech problems and avoid facial expressions which indicate non-acceptance.

STUDENT EVALUATION:

No modifications are needed unless the test is oral, and many speech handicapped students will still need no special considerations. Another form of testing might be considered, however, for students who stutter or who have such severe speech problems that others cannot understand them.

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

American Speech, Language and Hearing Association
9030 Old Georgetown Road
Washington, D. C. 20014 Telephone: 301-530-3400

Callier Center for Communication Disorders
Dr. George Moshegian, Director
1966 Inwood Road
Dallas, Texas 75235 Telephone: 214-783-3000

National Association for Hearing and Speech Action
814 Thayer Avenue
Silver Springs, Maryland 20910 Telephone: 301-588-5242

Texas Speech, Language and Hearing Association
Richard Stream, Executive Secretary
c/o Center for Audiology and Speech Pathology
University of Texas Medical Branch
Galveston, Texas 77550 Telephone: 713-765-2714

VISUALLY IMPAIRED

Students who have no vision or who have visual impairments which even with correction result in educational handicaps requiring special provisions.

STUDENTS WITH VISUAL IMPAIRMENTS MAY TEND TO EXHIBIT THE FOLLOWING BEHAVIORS:

- Avoids close desk work
- Possesses limited mobility
- Tilts head
- Holds book too close
- Rubs eyes frequently
- Runs into objects
- Confuses words
- Follows oral instructions better than written instructions
- Blinks and squints eyes frequently

SUGGESTIONS FOR TEACHING VISUALLY HANDICAPPED STUDENTS:

Permission was granted from the American Foundation for the Blind to include the following information taken from the booklet, When You Have A Visually Handicapped Child in Your Classroom: Suggestions for Teachers (Corn and Martinez, 1977). Suggestions for working with visually handicapped students include:

1. Feel comfortable using words such as "see" and "look." These words are as much a part of the vocabulary of the child with a visual handicap as they are of anyone else's. He uses them to connote his methods of seeing, either by touching or looking very closely, and in expressions used in daily conversation, such as, "See you soon."

2. Introduce him as you would any student. Questions will arise from other children and adults. Encourage the visually handicapped child to answer these questions for himself.

3. Include the visually handicapped student in all activities (physical education, home economics, industrial arts, etc.). The resource or itinerant teacher can offer suggestions as to methods and special equipment or aids which may be helpful in some activities.

4. At times all children like to be the center of attention (team captain, program announcer, etc.). Encourage the visually handicapped child to take leadership positions just as other children do.

5. The same disciplinary rules that apply to the rest of the class should apply to the visually handicapped child.

6. Encourage the visually handicapped student to move about the classroom to obtain his materials or visual information. He will know his own needs and his method of compensating will soon become part of classroom routine.

7. The visually limited child may not be aware of and therefore may not become interested in events occurring at a distance from him. He may not notice, for example, a facial expression, nod, or arm movement suggesting that he come over to you or respond to a question. Verbal cues may be necessary.

8. Provide additional work, desk, or locker space as needed to accommodate special materials (bulky braille or large print books, reading stands, etc.).

9. As as result of getting to know their classmate with a visual handicap, students may become interested in topics related to vision and visual impairment. You may wish to incorporate this into class lessons: in science, light and optics may be a topic for discussion; in health, attitudes towards disabilities, social studies lessons may include information about service agencies in the community. If the visually handicapped child feels comfortable about this information, he may want to participate in the presentation of the lesson.

10. All children are sensitive to peer criticism. Your own acceptance of the visually handicapped child will serve as a positive example for the class.

11. The visually handicapped student may bring adaptive aids into the classroom. Encourage him to use the aids as needed and to answer any questions that others have about the aids as they arise.

12. Because some visually handicapped children prefer not to bring attention to their handicap, they will use special aids and assistance from others only when absolutely necessary. In general, you should respect the child's wishes, but if you suspect he really needs more aids or assistance than he is using, you may wish to discuss this problem with the resource teacher.

13. When approaching a blind student, unless he knows you well, always state your name. Voices are not always easy to identify, particularly in crowds or stress situations.

14. A totally blind child or a child with severe visual impairment may exhibit certain mannerisms (fingers in the eyes or eye poking, rocking, extra movements). Encourage good posture and consult with the resource or itinerant teacher for dealing with this behavior.

HOW WILL THE VISUALLY HANDICAPPED CHILD GET AROUND THE CLASSROOM AND SCHOOL BUILDING?

1. A child with impaired vision can usually learn to avoid obstacles in the classroom and school corridors. The resource or itinerant teacher will alert you if there are any specific problems (stairs, outside playgound, dimly lighted areas, etc.).

2. The resource or itinerant teacher will familiarize a totally blind or severely visually handicapped child with the classroom and surrounding areas. She will also teach the student how to get to and from the classroom independently.

3. Sometimes a visually handicapped child may choose to (or need to) utilize a sighted guide. For ease and safety of movement the child should grasp the guide's upper arm, just above the elbow (a younger child walking with an adult may hold the adult's wrist) so that the thumb is on the outside and the fingers are on the inside of the guide's arm. Both the visually handicapped child and the guide hold their upper arms close to their own bodies. This should automatically position the child one-half step behind his guide.

   For negotiating narrow passageways, this guide can either press his arm close to his body or place his arm behind his body so that the blind child knows he must stand directly behind him. Verbal cues are also important: the guide should inform the student whether stairways and curbs are ascending or decending. As the student and guide become more familiar with each other, a full pause with feet together by the guide may be sufficient to indicate an approaching change in level. The guide will ascend or descend the first step and the student will follow one step behind. The resource or itinerant teacher will demonstrate these sighted guide techniques for you. Some school systems also arrange specialists in orientation and mobility to teach additional techniques.

4. For the safety of the visually handicapped child as well as for all other children, doors and cupboards should be all the way open or all the way shut. The visually handicapped child should also be told of any changes in the position of classroom furniture.

WHAT SPECIAL DEVICES WILL THE VISUALLY HANDICAPPED CHILD USE?

Some children may need only a few adaptive materials while others require a combination of several devices. These devices are generally categorized as optical or nonoptical and should only be provided by a special teacher of the visually handicapped or an eye specialist. A partial list follows:

Nonoptical Aids-These are devices that are not individually prescribed and may or may not be designed specifically for the visually handicapped.

A. Visual Aids

1. Bookstands-These help to reduce postural fatigue by bringing the work closer to the reader's eyes. When a bookstand is not available, one may be improvised by placing other books beneath the book that is to be read.

2. Felt tip pens-Usually preferred in black, and available in varying widths, these produce a bold letter or diagram. Using different colored markers will often help a student to emphasize sections of his notes when scanning would otherwise be quite difficult.

3. Acetate-Usually preferred in yellow, though available in various colors, acetate placed over the printed page will tend to darken the print itself as well as heighten the contrast of the background paper.

4. Lamps with rheostats-With variable intensities and positioning, lamps can provide the additional or dimmed illumination that a visually handicapped child may require.

5. Large-type books-For comfort or for those children who cannot read regular print at close distance even with an optical aid, large-type print is helpful. Its quality or typeface is as important to legibility as its size. Spacing between letters and lines is also important.

6. Bold-line paper-For children who find it difficult to see the lines on regular writing paper, bold lines are available in various formats, e.g. graph paper, large print staves for music notation.

7. Page markers and reading windows-These may be especially helpful to a child who finds it difficult to focus on a word or a line of print.

8. Sun visors and other shields-Children with light sensitivity (photophobia) may need to block out some of the light and glare in the environment.

B. Tactual Aids

1. Braillewriter, slate and stylus-A braillewriter is a manually operated, six-key machine which, as its name indicates, types braille. The slate and stylus, used to take notes, is easily carried in a pocket or on a clipboard. The slate is a metal frame with openings through which braille dots are embossed with the aid of a pointed stylus.

2. Raised line drawing board-A rubber covered board on which the blind child can draw or write on acetate with a pen or similarly pointed object, and feel the lines "raise up" as they are made. The geometric shapes, script letters, or other line diagrams thus reproduced are generally simple in form for tactual understanding.

3. Cubarithm slate-This aid enables the blind child to do mathematics using standard braille characters. Cubes with raised braille notation fit into square recesses in waffle-like frame.

4. Abacus-Teachers are now instructing students in the use of the Cranmer Abacus, especially adapted for the blind.

5. Raised line paper (writing paper, graph paper, etc.)-Raised line paper allows a student to write script "on the line" or to maneuver a graph either by placing markers onto the graph paper or by punching holes to indicate specific points.

6. Templates and writing guides-Made out of cardboard, plastic, or metal, these open rectangular forms allow signatures or other information to be written within their boundaries. Many blind people use these guides to sign their names.

C. Auditory Aids

1. Cassette tape recorders-Children use the recorder to take notes, listen to record texts, or formulate compositions or writing assignments.

2. Talking Book and other recording programs-The Library of Congress (Talking Book program) and other organizations provide free library services to visually handicapped persons, offering a wide variety of texts and leisure reading on discs and cassettes. Because the speeds at which these discs and cassettes are played differ from the speeds of commercially manufactured recordings, the Library of Congress lends special Talking Book and cassette machines to eligible persons.

3. Variable speed attachments-Attached to a tape recorder or Talking Book machine (some are built into the machine itself), these can be used to vary the speed at which the student listens to the tape, thereby speeding up or slowing down the rate of listening. (Speeding up the tape increases the pitch.)

4. Speech compressors-These devices speed up recorded materials without changing the pitch.

D. New Technological Advances in Electronic Aids-The following aids, while available at the present time, are often too expensive for schools or individuals to purchase. It is hoped that sometime in the near future they will be available to all who can benefit from them.

1. Talking Calculator-This hand-held calculator speaks each entry and result. It is capable of performing all the computations of a non-adapted electronic calculator. (Earphones are available.)

2. Optacon-This "Optical to Tactual Converter" (produced by Telesensory Systems, Inc.) transforms print into letter configurations of vibrating reeds that are read tactually.

3. Closed Circuit Television-The closed circuit television electronically enlarges printed material onto a television screen and can also change polarity: black print on a white background can be viewed as white print on a black background. Contrast and illumination can also be altered.

Optical Aids

A. Glasses with special prescriptions

1. Bifocals, prisms, contact lenses, or other lens combinations may be prescribed for a child with visual limitations to use at all times or at specified tasks.

2. Tinted Lenses-The light sensitive child may need to wear dark glasses indoors as well as out.

B. Magnifiers-Either hand held or in spectacles, magnifiers increase the size of the image reaching the eye. (It should be remembered that for some eye disorders, magnification can hinder rather than assist visual abilities.)

C. Telescopic aids-Children use these small telescopes (hand held or placed in spectacle frames) to view the chalkboard and class demonstrations.

HOW WILL THE VISUALLY HANDICAPPED CHILD WORK WITH PRINTED MATERIAL?

Chalkboard Notes:

1. When the chalkboard is located in the front of the classroom, the front row center is usually a good seat for a visually handicapped child. If demonstrations are given during class, the location of the demonstrations should be taken into consideration when assigning permanent seats. Because glare may cause discomfort or inability to read, some children prefer seats away from the window. For children with field defects or with special lighting needs, for example, those with albinism, a consultation with the resource or itinerant teacher will be helpful.

2. Assign a classmate (or permit the visually handicapped student, especially an older one, to choose his own) a) make carbon copies of his notes and lend them to the visually handicapped student, b) speak the notes aloud as he is copying them (in a low voice).

3. Encourage the visually handicapped child to walk up to or move his chair closer to the chalkboard; help him to position himself so as not to block the view of other students.

4. Lend the child your copy of the notes you put on the board or the book from which you have taken them.

5. Say the notes aloud as you are writing them on the board. The visually handicapped child can take them down as dictation.

6. Lend your notes in advance to the resource or itinerant teacher to enlarge, darken, or braille. This is especially helpful in a math class, where following step-by-step instructions is necessary.

Demonstrations in Class:

1. Try not to stand with your back to the window. Glare and light will silhouette your demonstration and eye fatigue may occur. (Cutting down on glare will benefit not only the visually handicapped child but the entire class.)

2. Allow the visually handicapped child to stand next to or to the side of the demonstration.

3. Allow the child to assist in doing the demonstration or to handle the materials before or after the observation period.

4. Closed circuit television (if available) may be useful and permit magnification of the demonstration.

Maps and Charts:

1. The visually handicapped child may wish to move closer to the chart or even sit on the floor. Permit him to do so as long as he does not block another child's view.

2. A desk copy of the chart or map may be given to the child.

3. The resource or itinerant teacher may have enlarged or otherwise modified maps available. Some maps or diagrams may need to be simplified for ease in viewing.

4. Raised maps or "sound maps" (recorded descriptions) may be used with blind children.

Filmstrips, Movies, Projectors, and Reading Machines:

1. If the filmstrip projector has a preview mechanism, allow the child to sit close enough to the screen to see it.

2. For a filmstrip with subtitles, request that another child read the titles aloud to the class.

3. Rear screen projectors allow children to sit right in front of the screen and can be most useful for a visually handicapped child.

4. Due to poor contrast or insufficient lighting certain reading machines, e.g., microfiche, may present reading problems. Another student with the same assignment can read the material aloud.

The individual responsible for audiovisual materials in a school or school district can be a resource for ideas and devices to be used in the classroom.

Reproduced Materials, Tests, and Homework:

Consult with the resource or itinerant teacher as to the print size and clarity needs of your student. The following suggestions may be helpful when visually handicapped children find reprints unclear or uncomfortable to read:

1. Give copies of reproduced materials to the resource or itinerant teacher to adapt as far ahead of time as possible. It will also be helpful if you give the visually handicapped student his assignments, particularly long term projects and reports, as far in advance as you can. This will allow for any special ordering of materials or locating of readers.

2. Extra time will frequently be needed to complete assignments and exams. Allowing time and a half is usually considered acceptable. The child may complete his work in the resource room or school

library. When you are certain that the child understands the work, it may be a good idea to shorten his assignments: for example, you may request that a student do only the odd numbered problems in the math homework.

3. Duplications in black ink are usually easier to read. However, if you must use purple, give the original ditto master to the child. This copy is usually darker and more legible.

4. Although you may be using separate answer sheets for the rest of the class, it may be easier for the visually handicapped child to answer directly on the test.

5. A classmate or resource or itinerant teacher may write down the answers given orally by the visually handicapped child. A tape recorder may also be used for this purpose, allowing for more independent responses. Some students will type their answers.

Texts and Other Books:

Many visually limited students can use books with regular-size type although they may have to bring the book closer to their eyes and use optical aids or reading stands. As mentioned above, they may also require more time to complete assignments.

1. If a child requires or feels more comfortable with large print, recordings, or braille, these will be obtained by the resource or itinerant teacher. Again, it is important that assignments be given to the resource or itinerant teacher ahead of time. If you know you are going to have a student with a visual handicap in your class, you may want to give titles of the books to be used to the resource or itinerant teacher even before the student enters the class. (Children who qualify as "legally blind" are entitled to receive from the federal government specialized equipment distributed through the American Printing House for the Blind in Louisville, Kentucky.)

2. In the upper grades students often request their own recorded or otherwise adapted texts through organizations such as Recording for the Blind or National Braille Association. Volunteer transcribers are another source of educational materials.

HOW WILL THE VISUALLY HANDICAPPED CHILD MANAGE IN ACTIVITIES OUTSIDE THE CLASSROOM?

A frequent concern of regular classroom teachers is the safety of the visually handicapped child. While certain precautions must sometimes be taken, it is important not to project your own fears onto the child.

The youngster's needs for exploration and independence must be balanced with sound safety practices-often of the sort that should be enforced for all children. However, the visually handicapped child should not be excluded from activities in the belief that he might hurt himself unless restrictions are specified by his physician or eye specialist.

Some children, however, prefer not to participate in certain activities (e.g., a visually limited child may find it very difficult to participate in ball games in which quick focusing and detail vision are necessary). Consult with the resource or itinerant teacher regarding the student's participation in class activities or the extra safety precautions you are considering with physical education, use of machinery, and other activities. Some of the following suggestions may be helpful around the school and out of doors:

1. Fire Drills-The blind or severely visually handicapped child should be instructed to take hold of the nearest moving child or adult and quickly and quietly follow others. Assigning a sighted student is ineffective when the assigned student is absent or panics.

2. Auditorium-The child may choose to sit closer to the stage and should be allowed to do so.

3. Trips-When visiting a theater, or a museum or other exhibit, you may want to notify someone on the staff that there is a visually handicapped child in your class. If told in advance, they may allow the child to go beyond museum barriers or touch some of the exhibits.

4. Lunchroom-Initial orientation to the lunchroom may be necessary so that the child learns where trays are located, where the lines form, etc.

WHAT ADDITIONAL SKILLS, MATERIALS, OR ASSISTANCE DOES THE VISUALLY HANDICAPPED CHILD RECEIVE FROM THE RESOURCE OR ITINERANT TEACHER?

1. Skills

   A. Typing-Some visually limited children find their own handwriting difficult for themselves and others to read and the task of writing fatiguing or with blind children, nonproductive. Typing provides an alternative means of doing written assignments.

   B. Listening Skills-These enable the visually handicapped child to make efficient use of his hearing, and are particularly important for listening to recorded texts

and obtaining information from teacher presentations and class discussions. Tuning into sounds in the environment is also essential for the development of orientation and mobility skills. Listening skills taught by the resource or itinerant teacher supplement those taught in the regular classroom.

C. Daily Living Skills-Essential for the development of independence and a feeling of self-worth, they include the "how to's" of daily living from good grooming to cooking a simple meal, to organizing and locating belongings. Consult with the resource or itinerant teacher for those tasks which the child can learn to do independently (e.g., using a combination lock, assisting in classroom cleanups).

D. Orientation and Travel Skills-Although an orientation and mobility instructor may become part of the educational team, the resource or itinerant teacher will instruct the child in the basics of movement and travel skills as needed.

E. Braille Reading and Writing-The blind child uses braille as his medium of communication as the sighted child uses print. The resource or itinerant teacher provides instruction in this skill, and will braille class assignments and write out the ink-print equivalent (interline) above the braille so that you can go over the child's work.

F. Visual skills-The resource or itinerant teacher will help a visually handicapped student to discover the conditions under which he can best use his vision, what types of illumination, positioning of materials, type size, etc. are best. When new glasses or optical aids are prescribed, the resource or itinerant teacher will consult with the eye specialist to discuss how the new aid will affect the conditions under which the student should work. If you have any questions about how the child should be using his aid, you can consult with the resource or itinerant teacher.

2. Materials-Special or adapted materials, many of which have been discussed previously, can be obtained for use in the resource room and regular classroom. The resource or itinerant teacher will help your student to learn to care for the tools and equipment he uses.

3. Additional Assistance

A. Concept Development-The child who has been severely visually

handicapped since birth or the first few years of life must be taught those body images and spatial concepts which the sighted child normally develops as a matter of course. For example, a child may need to learn such spatial concepts as "above," "below," and "next to" in relation to himself and others. Older students may have difficulty understanding the concepts of rotation and revolution. In addition to developing body image and learning spatial concepts, the visually handicapped child needs concrete educational experiences. The resource or itinerant teacher may help in planning and reinforcing these.

B. Remedial Academic Assistance-The resource or itinerant teacher will be in close contact with you in order to determine the child's strengths and weaknesses in academic subjects. The special teacher can help you locate tutors or otherwise provide for remediation if this should be necessary.

C. Counseling and Guidance-One of the most important jobs of the resource or itinerant teacher is to provide an understanding atmosphere in which the visually handicapped child can express and learn to deal with his feelings about his physical disability. An effort is also made to help the child cope with the attitudes of others. With encouragement from the resource or itinerant teacher, the visually handicapped student learns to communicate his needs.

The school guidance department also shares the responsibility of personal counseling and career education. Students approaching the age of 14 (16 in some states) should also consult with a vocational counselor from the state agency or department concerned with the needs of the visually handicapped. Students should become aware of their state's programs for financial assistance in higher education and vocational planning.

The resource or itinerant teacher will also maintain close contact with the parents to help them to understand various aspects of child development as it relates to their visually handicapped youngster.

D. Coordination of Services-The resource or itinerant teacher will act as a liaison between the child's parents and community or special service organizations, as necessary. Careful records are kept to be sure that the child is seen regularly by an eye specialist.

The blind student will often need more than the average amount of space

in order to accommodate Braille books and other equipment. The teacher may need to allow him/her access to a bookshelf, extra desk, or some type of storage area.

Since the blind student relies on his/her hearing, it is important that he/she sits where he/she can hear well. This does not necessarily mean the front row, however.

Use of the typewriter, brailler, recordings, and live readers can produce noise, and the student should be considerate of others in this aspect. Headphones keep a recording silent so far as other students are concerned. Use of the slate and stylus (which produce very little noise) is usually preferred in place of the Perkins Brailler in the classroom. If a typewriter or reader is disturbing to other students, the work can be done in a far corner of the room or even outside the classroom, if necessary. However, the student should return to the classroom or group as soon as the activity has been completed.

It should not be necessary that the student always sit next to the door or in a location especially easy to reach. Older students should be able to take responsibility for selecting an appropriate seating area themselves. (Willoughby, et al, 1978:23).

STUDENT EVALUATION:

Willoughby et al, (1978:25) suggested that when testing visually handicapped students, the teachers might be aware of the following techniques:

1. Have the test transcribed into Braille or large print.
2. Allow the student to use a reader (or tape recorded copy of

the test) and work in another room. He/she may respond by dictating answers or type them.

3. Test the blind student individually and orally. It is very important that he/she be given the same test the others take.

4. With an inexperienced student, the resource person might administer the test.

For certain timed tests, the limit may not be fair for a blind student, due to the use of alternative techniques. In this case, it is suggested that the teacher allow him/her to take more time without penalty if necessary, but that the teacher also observe his/her score at the standard time limit so that he/she may work toward success within the regular time.

Since the exploration of careers also involves preparation for or developing job acquisition skills, it is important for students to begin developing appropriate on-the-job mannerisms. For instance, if a blind student happens to have an unwanted mannerism such as head nodding or finger tapping, the teacher should handle this in the same way as it is handled with other students. Every classroom will have some students who bite their nails, twist their hair, etc. Blindness itself does not cause such habits, but sometimes they may be caused by the way the disability has been handled (Willoughby, et al, 1978:25).

RESOURCES

The following organizations may be able to respond to inquiries related to handicapping conditions by supplying information and materials upon request.

American Foundation for the Blind, Inc.
15 West Sixteenth Street
New York, New York 10011 Telephone: 212-924-0420

Provides a wide variety of services for the visually handicapped person, the public and the professional.

Promotes the development of educational, rehabilitation, and social welfare services for blind and multiply handicapped children and adults. Programs for the partially sighted are included in educational services.

Conducts and stimulates research to determine the most effective methods of serving visually handicapped persons.

Provides professional consultation to governmental and voluntary agencies. Conducts agency and community surveys to assist in the expansion and improvements of specialized services.

Conducts institutes, workshops, and training courses for professional personnel. Provides legislative consultation.

Operates the M. C. Migel Memorial Library, a special reference library on blindness. Publishes books, monographs, leaflets, and periodicals in conventional print, recorded, and braille forms. Manufactures talking books. Develops, manufactures, and sells special aids and appliances for use by blind persons. Has public education program.

American Printing House for the Blind, Inc.
1839 Frankfort Avenue
Louisville, Kentucky 40206 Telephone: 502-895-2405

National organization for the production of literature and the manufacture of educational aids for the visually handicapped. Since 1879, through the Federal Act "To promote the Education of the Blind," receives an annual appropriation from Congress to provide textbooks and educational aids for all students attending schools and/or special educational institutions of less than college grade. Through funds donated by the public, publishes braille and talking book editions of the Reader's Digest, and a weekly talking book edition of Newsweek Magazine.

Publishes braille books, music, and magazines; large-type textbooks; talking books and magazines; cassette tapes; and educational tape recordings. Manufactures special educational aids for blind and visually handicapped persons. Maintains an educational research and development program concerned with not only educational procedures and methods, but also the development of educational aids.

Association for Education of the Visually Handicapped
919 Walnut Street
Philadelphia, Pennsylvania 19107 Telephone: 215-923-7555

Formerly the American Association of Instructors of the Blind. A membership organization open to persons professionally concerned with or interested in the education, guidance, vocational rehabilitation, or occupational placement of visually handicapped persons. Assists in efforts to improve material and methods of teaching visually handicapped persons, and to expand their opportunities to play an active role in society.

The Braille Monitor
National Federation of the Blind
1346 Connecticut Avenue N.W.
Suite 212
Washington, D.C. 20542

A monthly magazine which carries articles of current interest regarding blindness. Published in Braille, talking book, and inkprint. Available to all interested persons.

Division for the Blind and Physically Handicapped
Texas State Library
Box 12927/Capitol Station
Austin, Texas 78711 Telephone: 1-800-252-9605

Services and materials available to students with poor vision that prevents reading ordinary print, physical problems that prevent holding a book or turning its pages, or a learning disability with a physical basis. Materials are available on phonograph records (talking books), recorded on cassette tape, embossed in Braille, and printed in large type. Machines on which to play the recorded books and magazines are provided at no charge. Earphones, speed controls and pillow speakers can also be requested. The services do not include textbooks, but rather fiction, non-fiction, classics, and other literature for children and young adults.

Local Textbook Committee

Textbooks for the visually impaired in braille, recorded, or in large print are available through the local textbook committee in each school. This committee should have the forms for registering the students with the Texas Education Agency and for ordering the materials. Forms can also be obtained from Ella Britton, Textbook Division, Texas Education Agency, Austin, Texas 78711.

Division for the Visually Handicapped
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091 Telephone: 703-620-3660

A professional organization of teachers, school administrators, and others concerned with children who require special services. Publishes periodicals, books, and other materials on teaching the exceptional child.

Napier, Grace D., and Weishahn, Mel W. Handbook for Teachers of the Visually Handicapped. Greeley, Colorado: Rocky Mountain Special Education Instruction Materials Center, 1969.

National Society for the Prevention of Blindness, Inc.
79 Madison Avenue
New York, New York 10016 Telephone: 212-684-3505

Through state affiliates, conducts a program of public and professional education, research, industrial, and community services to prevent blindness. Services include promotion and support of local glaucoma screening programs, pre-school vision testing, industrial eye safety, collection of statistical and other data on nature and extent of causes of blindness and defective vision, improvement of environmental conditions affecting eye health in schools and colleges, and dissemination of information on low vision aids and clinics.

Orlansky, Michael D. Mainstreaming the Visually Impaired Child. Boston, Mass: Teaching Resources Corporation, 1977.

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Willoughby, Doris, Lansing, Shirley, Barber, Mary, and Maurer, Patricia. Your School Includes A Blind Student. Chatsworth, California: National Federation of the Blind Teachers Division, 1978.

VOCATIONAL ASSESSMENT

A vocational appraisal system to be used as part of an Occupational Exploration program should assist a student in selecting a high school education program that will lead to the accomplishment of his/her career goals. The vocational assessment should not be aimed, therefore, at the student's selecting a specific job, but rather a vocational area.

Vocational assessment is an area where the cooperation of special education and vocational education personnel is vital. Much of the appraisal process will be conducted by the special education team and communication between the two areas is therefore necessary. Vocational and special education personnel should agree on what tests to give and why they are to be given. Some of the information will already be in the student's special education folder, some can best be obtained from teachers, and some can only be gained through formal assessment. Any information used should be current as out-of-date information may indicate problems that no longer exist. The report needs to be written in a form that can be conveyed to the student as to strengths and weaknesses and how these relate to jobs and choosing a vocational program area. If these test results are to be used most effectively, the student must be a part of the decision making process.

When testing handicapped students, as many of the following assessment areas as are appropriate for the individual student should be included. Thanks is given to the Council for Exceptional Children for allowing the reproduction of this material from Vocational Education of Handicapped Students: A Guide for Policy Development (Davis, 1978:23,27-32).

MEDICAL, PSYCHOLOGICAL, EDUCATIONAL, AND SOCIAL DATA:

Medical data should be reviewed to determine existing medical conditions and prescribed treatments. A physical capacities appraisal report which evaluates the effect the student's physical limitations may have on potential occupational choices should be prepared by an occupational therapist.

Psychological data should be reviewed to help determine vocational readiness and interests. This information may include the inventory of sensory, motor, language, perceptual, attentional, cognitive, affective, attitudinal, self image, interpersonal, behavioral, interest, and vocational factors.

Educational progress and level of academic achievement should be reviewed to determine adjustments needed in instructional methods and materials and remedial instruction needed in order to succeed in a particular vocational education course. This information can be obtained from school records and interviews with teachers and guidance counselors.

Social and behavioral assessment data should be reviewed to determine the student's social maturity, appropriateness of behavior, ability to get along with peers and adults, and motivation to achieve. The display of appropriate behaviors associated with personal and social development is an indication of readiness for vocational assessment. When available, work experience records, job progress reports, and observations of work attitude and behavior should be part of the review.

VOCATIONAL APTITUDES AND INTERESTS DATA:

Selection of Standardized Instruments

Careful selection should be given to the selection of standardized vocational instruments for use with handicapped students. They must be valid for the purposes intended and reliable for use with students with particular handicaps.

Selection of standardized vocational instruments and tests should be guided by, but not limited to, the following considerations:

- Student's probable motivation and ability to achieve on the particular test.
- Relevance of task to actual employment situations.
- Likelihood of obtaining reliable measurements from a single performance.
- Usefulness of comparison of scores with general population norms.
- Adaptability for use with handicapped students.
- Validity for students with particular handicapping conditions.

- Value of criterion referenced rather than norm referenced instrument.

Alternative to Using Standardized Instruments

As alternative to the use of standardized tests, other procedures should be developed for inclusion in a student's vocational assessment. These procedures include, but are not limited to:

- Developing instruments locally.
- Revising published instruments and adapting to local needs.
- Individualizing the administration of standardized vocational instruments and interpreting results on the basis of local criteria and knowledge of the handicapped individual.
- Assessing through performance observation, teacher report, parental judgement, anecdotal records, and so on.

WORK SAMPLES:

Selection

Selection of work samples should be guided by, but not limited to, the following considerations:

- Appropriateness for subject population (various handicapped conditions represented among potential evaluees).
- Graduated in difficulty from very simple structured operations to more difficult activities involving symbolic reasoning and abstract conceptualization.
- Range from gross motor control to fine finger dexterity.
- Appropriateness for courses and training areas offered in local program.
- Appropriateness to employment opportunities in local community.
- Sufficient variety to determine an individual student's interests.

Sources

Work samples to meet the assessment needs of all handicapped students can be acquired in several ways.

- Validated commercial work evaluation systems can be purchased.

These consist of work samples of varying degrees of complexity representing a large range of occupational areas.

- Samples that have been developed by rehabilitation centers can be acquired.
- Work samples can be developed locally to supplement commercial systems.

Guidelines for Administration

Guidelines for administering work samples should be based on the individual needs of handicapped students. They should include, but not be limited to, the following:

- Provision of individualized work sample battery for each student.
- Use of instructions that minimize reliance on reading skills or do not require reading to complete the task.
- Consideration of student's performance on work samples in relation to local criteria.
- Opportunity for the student to train for the work samples and to retake them as necessary to increase success.

WORK BEHAVIOR:

Various vocational behavior rating scales and checklists are available for rating appropriateness of behaviors.

Specific behaviors that should be observed may include, but are not limited to:

- Attention span and work tolerance.
- Grooming
- Maturity
- Neatness
- Punctuality
- Reaction to frustration and stress
- Need of supervision
- Emotional stability
- Self confidence

EXPLORATORY SHOPS:

The tryout in one or more vocational training areas should be based on information gathered during the vocational assessment. When most aspects of the assessment are complete, the vocational evaluator/counselor should assist the student in selecting a trial area(s).

Alternative Ways to Provide Tryouts

An exploratory vocational course tryout can be accomplished in several ways:

- Placement in a regular vocational education course at a point at which the student can participate satisfactorily (such as when an introductory or less complex instructional module is being taught).
- Placement in the regular course with small group instruction.
- A special course for handicapped students which includes exploratory vocational shop activities representative of the nine occupational areas of vocational education.
- Individualized programed instruction (self contained vocational exploration package) that replicates actual job requirements.
- Special residential career exploration program (available in some communities).

The length of placement in a selected area should be based on the student's performance on the specific tryout. At the end of the student's successive vocational exploration, the results should become part of the total vocational assessment data.

Benefits of Vocational Tryouts

Through the process of vocational exploration, the student becomes more aware of the vocabulary and training requirements of a particular occupational field and can determine more realistically whether he or she has the aptitude and interest for participation in a particular preparation program.

The exploratory program is also of value to vocational instructors, for it provides them with experience in working with handicapped individuals.

COUNSELING:

Vocational counseling provides assistance to students in their selection of career goals. Such counseling should take place prior to the students' involvement in vocational assessment and again after assessment activities have been completed.

The Background Interview

The vocational counselor should conduct a background interview with the student prior to assessment to:

- Ascertain the student's interests and tentative career goals.
- Obtain specific biographical data pertaining to medical, social, psychological, educational, economic, and vocational factors.
- Determine readiness for assessment.
- Develop an assessment plan based on the individual student's interests and potential.

Followup Counseling

After the vocational assessment has been completed, another counseling session should be held with the student to review the results of the assessment and to assist the student in developing tentative plans for participation in vocational skill preparation based on his or her interests and aptitudes.

Assessment in as many of these areas as possible will help the student and the school personnel make realistic and hopefully satisfying decisions for successful placement in vocational programs.

ASSESSMENT REPORT:

After a student's vocational assessment is completed, the vocational evaluator/counselor should prepare a report that reflects the state of the student's vocational aptitudes, interests, assets, limitations, and special needs for vocational placement. The report should include, but not be limited to:

- Readiness skills for assessment.
- Specific traits assessed (behavioral, aptitude).
- Results of the various components of assessment:
  - Test results
  - Work sample results.
  - Production records from workshop or prevocational activities.
  - Results of exploratory course tryouts.
  - Results of vocational counseling.
- Specific problems in various areas of assessment

- Major assets
- Determination of potential for vocational training and placement.
- Supportive needs required to achieve vocational success (medical help, psychological counseling, social skill development, academic remediation).
- Physical modifications of equipment and facilities that are needed in the vocational training area selected.
- Recommendations for follow-up services.
- Recommendations for vocational training and placement.

VOCATIONAL ASSESSMENT INSTRUMENTS

The following pages contain information on vocational aptitude and interest tests and on work sample systems that are often used with students. Some of the tests have been designed for handicapped students. Others that were designed for "normal" students may contain special norms and administration procedures for groups of handicapped individuals. There are also those tests that have not been modified for handicapped students. These are not all the tests available in these areas, so if these are not appropriate for a particular student the teacher should contact other sources.

When testing handicapped students, modifications may need to be made. The needed modifications would vary, and suggestions for these can be found in the previous discussion of each handicapping condition. Caution should be used, however, in test interpretation and validity when test modifications have to be made.

Since the purpose of the vocational assessment is to help the student choose an appropriate vocational program, the results of a study conducted at Texas A&M University, Project ENCOUNTER, might be useful. The study attempted to identify needed entry-level skills into three vocational program areas: automobile mechanics, vocational homemaking, and vocational agriculture. These entry-level skills were then reviewed as to achievement expectations for the handicapped.

When counseling handicapped students about choosing realistic vocational programs, it may be very useful to have such a list of identified needed skills to help the student realistically assess his chances for success. Information on this study may be obtained from Vocational Special Needs

Project ENCOUNTER Staff, Interdisciplinary Education Program, College of Education, Texas A&M University, College Station, Texas 77843. This information could very effectively be used in conjunction with test results in helping students make realistic vocational choices.

APTITUDE TESTS

+ Test description taken from Brolin and Kokaska (1979:215-219) with permission.

* Test description taken from Foster, et al (1977:339-352) with permission.

L Applicability of this test with a student having this handicapping condition will depend on the severity of the handicap.

	HEARING IMPAIRED	MENTALLY RETARDED	ORTHOPEDICALLY IMPAIRED	OTHER HEALTH IMPAIRED	SERIOUSLY EMOTIONALLY DISTURBED	SPECIFIC LEARNING DISABILITY	SPEECH IMPAIRED	VISUALLY IMPAIRED
*Flanagan Aptitude Classification Tests (FACTS): Considered a successful predictor of vocational success if administered individually. Measures Verbal Reasoning, Numerical Ability, Abstract Reasoning, Space Relations, Mechanical Reasoning, Language Usage, and Clerical Aptitude. Science Research Associates	x		L	x	x	x	x	L
*General Aptitude Test Battery (GATB): Often used in vocational planning to determine aptitudes. Used by state Divisions of Employment Security but may be given in schools by approved examiners. GATB assesses intelligence, verbal, numerical, and spatial abilities, form perception, clerical perception, motor coordination, finger dexterity, and manual dexterity. The pegboard test requires standing, the rivet board requires fine dexterity, and the tests are highly speeded. Has a revision for the hearing impaired. U. S. Employment Service	x	L	L	x	x	x	x	L
Nonreading Aptitude Test Battery (NATB): Nonreading adaptation of GATB. Normed on disadvantaged persons, but can be used with some handicapped persons. U. S. Employment Service	x	x	L	x	x	x	x	L
*Minnesota Clerical Test: Evaluates speed and accuracy in perceiving details. Number comparison and name comparison. Psychological Corporation	x		L	x	x	x	x	L
*SRA Clerical Aptitude Test; Measures Office Vocabulary, Office Arithmetic, Office Checking. Science Research Associates	x		x	x	x	x	x	L
*Differential Aptitude Tests (DAT): Tests of verbal reasoning, numerical ability, mechanical reasoning, abstract reasoning, space relations, clerical speed and accuracy, spelling, language usage. Available in braille from Blind Center, Inc. Psychological Corporation	x		x	x	x	x	x	x

APTITUDE TESTS

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	HEARING IMPAIRED	MENTALLY RETARDED	ORTHOPEDICALLY IMPAIRED	OTHER HEALTH IMPAIRED	SERIOUSLY EMOTIONALLY DISTURBED	SPECIFIC LEARNING DISABILITY	SPEECH IMPAIRED	VISUALLY IMPAIRED
*Crawford Small Parts Dexterity Test: Tests fine eye-hand coordination. Special norms for blind and partially sighted. Psychological Corporation	x	x	L	x	x	x	x	x
Purdue Pegboard: Measures two kinds of finger dexterity related to productivity in routine manual jobs. Science Research Associates	x	x	L	x	x	x	x	L
*Minnesota Rate of Manipulation (1969 Edition): Tests finger and hand manipulation. Subtests are Placing, Turning, Displacing, One-Hand Turning and Placing, Two-Hand Turning and Placing. Special directions and norms for the blind available from Education Testing Bureau. American Guidance Service, Inc.	x	x	L	x	x	x	x	x
*Revised Minnesota Paper Form Board Test: Related to both art and mechanical abilities. Tests spatial relations and mental manipulation of geometric forms. Psychological Corporation	x	x	L	x	x	x	x	L
*Lighthouse Clerical Aptitude Test Battery: Measures potential in transcription typing. New York Association for the Blind								x
Programmer Aptitude Battery: Aptitudes relative to computer programming. Tests verbal meaning, reasoning, letter series, number ability, diagramming. May not be appropriate for administration to ninth grade students. Science Research Associates	x		x	x	x	x	x	x
*Seashore Musical Talent Test: Scores on pitch, loudness, rhythm, tone, timbre, tonal memory. Psychological Corporation		x	x	x	x	x	x	x

APTITUDE TESTS

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Pennsylvania Bi-Manual Work Sample: Assemblying and disassemblying nuts and bolts. Measures finger dexterity of both hands, whole movement of both arms, eye-hand coordination, bi-manual coordination. American Guidance Service *Norms available for blind and partially sighted from Educational Test Bureau.	x	x	L	x	x	x	x	x
+Minnesota Spatial Relations Test: This test consists of four form boards and is designed to measure speed and accuracy in discriminating odd sizes and shapes for mechanical tasks. American Guidance Service	x	x	L	x	x	x	x	L
Practical Dexterity Board: Involves following directions in a series of manipulative activities. Dr. John G. Miller	L	x	L	x	x	x	x	L
Bennett Hand Tool Dexterity Test: Tests mechanical aptitude and previous experience in using mechanics' tools. The Psychological Corporation	x	x	L	x	x	x	x	L
O'Connor Finger Dexterity Test: Assesses motor coordination and finger and manual dexterity. Used to predict success in some kinds of assembly work. Stoelting Co.	x	x	L	x	x	x	x	L
O'Connor Tweezer Dexterity Test: Assesses motor coordination and finger and manual dexterity. Indicates manual aptitude for work involving precision and steadiness in the use of small hand tools. Stoelting Co.	x	x	L	x	x	x	x	L
Test of Mechanical Concepts: Untimed test of basic mechanical ability, testing mechanical interrelationships, mechanical tools and devices, and spatial relations. Science Research Associates	x		x	x	x	x	x	L

INTEREST INVENTORIES

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	HEARING IMPAIRED	MENTALLY RETARDED	ORTHOPEDICALLY IMPAIRED	OTHER HEALTH IMPAIRED	SERIOUSLY EMOTIONALLY DISTURBED	SPECIFIC LEARNING DISABILITY	SPEECH IMPAIRED	VISUALLY IMPAIRED
Geist Picture Interest Inventory (PGII): Reading for such words as "awards, career ability," etc., is required. Has 11 interest areas. Western Psychological Services	x	x	x	x	x	x	x	L
Vocational Interest and Sophistication Assessment (VISA): Developed for the retarded, reading-free. Also evaluates knowledge of job conditions. Separate scales for male and female. Dr. Joseph J. Parnicky	x	x	x	x	x	x	x	L
Reading Free Vocational Interest Inventory: Developed for the retarded, reading-free. Separate scales for male and female. American Association on Mental Deficiency	x	x	x	x	x	x	x	L
*Kuder Occupational Interest Survey, Form D: Reading on sixth grade level, so the vocabulary level is fairly high. Normed for eleventh grade and up. Science Research Associates	x		x	x	x	x	x	x
*Strong Campbell Interest Inventory: At least sixth grade reading level. Normed for eleventh grade and up. Psychological Corporation	x		x	x	x	x	x	x
*PRG Interest Inventory for the Blind: Developed by Bauman to overcome subject's tendancy to answer based on what s/he can or cannot do, rather than on his/her true interests. Inventory is based on jobs done, and hobbies chosen by blind people. Administered orally or by tape recording. Nevil Interagency Referral Service								y
COPS I Interest Inventory: Compares students' interests to occupational clusters. Exploration is then suggested in highest rated areas. EdITS Publishers	x		x	x	x	L	x	L

INTEREST INVENTORIES

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	HEARING IMPAIRED	MENTALLY RETARDED	ORTHOPEDICALLY IMPAIRED	OTHER HEALTH IMPAIRED	SERIOUSLY EMOTIONALLY DISTURBED	SPECIFIC LEARNING DISABILITY	SPEECH IMPAIRED	VISUALLY IMPAIRED
COPS II Intermediate Inventory: Lower reading level than COPS I, but tests the same concepts. EdITS Publishers	x	x	x	x	x	x	x	L
Minnesota Importance Questionaire: This instrument focuses on an individual's vocational needs, for example, ability utilization, achievement, activity, advancement, authority, company policies and practices. It requires about a fifth grade reading level and is appropriate for most handicapped persons, except blind and lower level retarded. There is a Form S version developed for use with the mentally retarded and has a lower reading level. Vocational Psychology Research	x	L x	x	x	x	x	x	L
+Wide Range Interest and Opinion Test (WRIOT): The WRIOT is an inventory measuring interests ranging from unskilled through professional occupations. No reading other than "least" and "most" and the letters "A, B, and C" is required. There are special instructions on use for severely mentally or physically disabled persons. It is not recommended for blind individuals. Guidance Associates of Deleware	x	x	x	x	x	x	x	
Picture Interest Exploration Survey (PIES): Slide-presented inventory. The slides are photographs and only show the hands of the workers, therefore minimizing sex bias. All levels of jobs are presented. May be given individually or in a group, and students may administer it themselves. No reading recuired. May be given in more than one time period. Educational Achievement Corporation	x	x	x	x	x	x	x	L

WORK SAMPLES:

The following information on work samples was reprinted with permission by Charles E. Merrill Publishing Company from Career Education for Handicapped Children and Youth (Brolin and Kokaska, 1979:219-222).

In the past several years, a substantial number of work evaluation systems have been developed to assess vocational potentials of various types of handicapped persons. Their procedures, although difficult to validate, have an advantage over most standardized vocational aptitude and interest tests because of their closer proximity to the world of work. Individuals taking work samples can more readily accept their significance to career planning, and most actuality are related to specific jobs or job families listed in the Dictionary of Occupational Titles. In addition, many of the systems do no require the rigid administration and interpretation that standardized tests require, permitting retesting and interpretations as needed. The work sample field is rapidly evolving and warrants serious consideration from school personnel.

The following 10 work evaluation systems have been designed in the 1960s and 1970s and are briefly presented for your information. Requests for more extensive information and costs should be directed to their publishers.

Vocational Information and Evaluation Work Samples (VIEWS). The VIEWS was developed by the Jewish Employment and Vocational Service, 1913 Walnut Street, Philadelphia, Pa. 19103. The system became available in 1976 and consists of a battery of hands-on activities to be used in a simulated work environment to assess the work potential of persons with learning disabilities and mental retardation. The unique contribution of the VIEWS is that it does not require a reading ability and incorporates the use of demonstration, practice, and repeated instruction to gain insight into the individual learning style and to relate it to future instructional experiences. The VIEWS reveals changes in learning and performance quality and rates while assessing vocational potential in many occupational areas. Training in the system is required.

JEVS Work Samples. This system was also developed by the Jewish Employment and Vocational Service in Philadelphia. It consists of 28 work samples. They were originally intended for use with culturally disadvantaged youth because they typical tests given by the state employment service were not adequate for this population. They were developed under contract with the U. S. Department of Labor and have been adopted by many of their offices throughout the country. The work samples have also been successful with many physically, emotionally, and mentally handicapped individuals. The samples expose the client to a variety of vocational possibilities and relate the findings to Worker Trait Groups in the Dictionary of Occupational Titles (1977). A 2-week training session is required for those who purchase the system.

Talent Assessment Program (TAP). This system consists of 10 work samples. They can be administered in about 2 hours to most handicapped individuals. The system was developed by Wilton Nighswonger, 7015 Colby Avenue, Des Moines, Iowa 50311, to assess the individual's functional characteristics applicable to work in industrial, technical, and service areas. Several individuals can be tested at the same time. Directions are given orally. The system consists of a battery of perceptual and dexterity tests measuring fine and gross finger dexterity, visual and tactile discrimination, and retention of details. It is not intended to be a comprehensive system but does seem to reliably assess many industrial-type aptitudes that are reflective of an individual's vocational potential in these areas. Training is required to use the system and takes 1 1/2 days.

MICRO-TOWER. This is a system of 13 work samples for individuals with mild (educable) retardation through the normal range, adolescents and adults. It was developed at the Institute for Crippled and Disabled (ICD), 340 East 24th Street, New York, N. Y. 10010. A cue-stop cassette tape unit presents the instructions, and a photobook is used to illustrate related occupations and various steps within the work samples. The entire evaluation takes 3-5 days. The work samples are: bottle capping and packing; graphics illustration; making change; message taking; zip coding; payroll computation; electronic connector assembly; record checking; blueprint reading; filing; want ads comprehension; mail sorting; and lamp assembly. A learning period is permitted before evaluation, which is an appealing feature for individuals with learning problems. There is a feedback of results to the individual, and group discussion techniques are highly encouraged as an integral part of the system. Training is not mandatory.

Hester Evaluation System (HES). This system was developed by Edward Hester, Goodwill Industries, 120 South Ashland Boulevard, Chicago, Illinois 60607. It consists of 26 separate tests measuring 28 independent ability factors. The HES measures factor-pure abilities and integrates them with other data to relate the information to the traits corresponding to the Data-People-Things levels of the DOT. A master computer center is available to users to process the results of job possibilities listed in the DOT. The computer prints out a list of specific jobs within each Worker Trait Group. The performance tests can be administered in 5 hours by a competent technician. Formal training in the use of the system takes 3 days in Chicago. The system is said to be appropriate for most types of handicaps, including the blind and partially sighted.

The Valpar Component Work Sample Series. The Valpar was developed by Valpar Corporation, 655 n. Alvernon Way, Tucson, Arizona 85716. It consists of a series of 16 work samples with more being planned and developed. The work samples are: small tools, size discrimination, numerical sorting, upper extremity range of motion, clerical comprehension and aptitude, independent problem solving, multi-level sorting, simulated assemby, whole body range of motion, tri-level measurement, eye-hand-foot coordination, soldering and inspection, money handling, integrated peer performance, electrical circuitry and print reading, and drafting. The samples are designed to provide and insight into many worker characteristics and are keyed to the Worker Trait Arrangement in the DOT. Two weeks of training is recommended but not required.

Comprehensive Occupational Assessment and Training System (COATS). The COATS is a comprehensive system developed by PREP, Inc., 1575 Parkway Avenue, Trenton, New Jersey 08628. The system has four major components: Living Skills, Work Samples, Job Matching System, and Employability Attitudes. Only the Work Samples component will be discussed here. The work samples assess each individual's interest, performance capability, and general behavior relative to various job situations and have the following titles: drafting, clerical/office, metal construction, sales, food preparation, medical services, travel services, barbering/cosmotology, small engines. All work samples can be administered in one audio-visual station, are individualized, self-paced, and computer-scored. All of the samples are removable, easy to install, and conveniently packaged in compact, lockable formica cubes.

Wide-Range Employment Sample Test (WREST). The WREST was developed in a workshop for the mentally retarded in Wilmington, Delaware and refined by Joseph Jastak. It is distributed by Guidance Associates of Delaware, 1526 Gilpin Avenue, Wilmington, Delaware 19806. It consists of 10 work samples: single and double folding, pasting, labeling, and stuffing; stapling; bottle packaging; rice measuring; screw assembly, tag stringing; swatch pasting; collating; color and shade matching; and pattern making. Its primary purpose is to evaluate dexterity and perceptual abilities. Administration time is about 1 1/2 hours; for groups, 2 hours. Industrial norms, short administration time, and precise instructions are strengths of the battery. The battery is useful for moderately and mildly limited persons. No training is required for its purchase.

McCarron-Dial Work Evaluation System. This system was developed by Lawrence McCarron and Jack Dial and is available from Commercial Marketing Enterprises, 11300 North Central, Dallas, Texas 75231. It comprises 17 separates instruments groups into five factors: verbal-cognitive, sensory, motor abilities, emotional, and integration-coping. The system attempts to assess the individual's ability to function in one of five program areas: day care, work activities, extended sheltered employment, transitional sheltered employment, and community employment. The first three factors can be assessed in 1 day; 2 weeks of systematic observation in a work setting are required for the other two factors. Training of 1-2 weeks is required, depending on the evaluator's experience.

TEST SOURCES

American Association on Mental Deficiency
5201 Connecticut Avenue, N. W.
Washington, D. C. 20015

American Guidance Service, Inc.
Publisher's Building
Circle Pines, Minnesota 55014

Blind Center, Inc.
Santa Clara County
101 North Bascom Avenue
San Jose, California 95126

Dr. John G. Miller
607 North Hughes
Amarillo, Texas 79107

Dr. Joseph J. Parnicky
Ohio State University
9 West Buttles Avenue
Columbus, Ohio 43215

EdITS Publishers
P. O. Box 7234
San Diego, California 92107

Educational Achievement Corporation
P. O. Box 7310
Waco, Texas 76710

Educational Test Bureau
720 Washington Avenue, S. E.
Minneapolis, Minnesota 55414

Guidance Associates of Deleware, Inc.
1526 Gilpin Avenue
Wilmington, Delaware 19806

Nevil Interagency Referral Service
919 Walnut Street, 4th Floor
Philadelphia, Pennsylvania 19107

New York Association for the Blind
111 East 59th Street
New York, New York 10022

Psychological Corporation
757 3rd Avenue
New York, New York 10017

Science Research Associates
259 East Erie Street
Chicago, Illinois 60611

Stoelting Company
1350 S. Kostner Avenue
Chicago, Illinois 60623

U. S. Employment Service
(Contact your closest state employment commission office.)

Vocational Psychology Research
University of Minnesota
Minneapolis, Minnesota 55455

Western Psychological Services
12031 Wilshire Boulevard
Los Angeles, California 90025

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Brolin, Donn E. Vocational Preparation of Retarded Citizens. Columbus, Ohio: Charles E. Merrill Publishing Company, 1976.

Brolin, Donn E. and Kokaska, Charles J. Career Education for Handicapped Children and Youth. Columbus, Ohio: Charles E. Merrill Publishing Company, 1979.

Foster, June C., Szoke, Claire D., Kapisovsky, Peggy, and Kriger, Leslie. Guidance, Counseling, and Support Services for High School Students with Physical Disabilities: Visual, Hearing, Orthopedic, Neuromuscular, Epilepsy, Chronic Health Conditions. Cambridge, Massachusetts: Technical Education Research Centers, 1977.

SUGGESTED OCCUPATIONAL EXPLORATION CURRICULUM GUIDES

The following suggested curriculum guides and materials may be useful to the occupational exploration teacher who has handicapped students. Some of the materials were developed for handicapped and/or disadvantaged students. Others, however, were developed for average students but parts or all may be modified for use with special needs learners.

No attempt has been made here to list suggested occupational exploration materials for all fifteen USOE career clusters. The following six were selected for study: Agribusiness and Natural Resources, Business and Office, Construction, Marketing and Distribution, Personal Services, and Transportation.

Two sources which the teacher may find of use in several clusters are listed below.

Coordinated Vocational Academic Education (CVAE) available from:
The Occupational Curriculum Laboratory
c/o John Hayes, Director
East Texas State University
Commerce, Texas 75428

The CVAE curriculum was developed for use with disadvantaged students and may easily be used with many handicapped students. It incorporates vocational skill training into academic classes.

Handbook for Vocational Programs for the Handicapped available from:
Maine State Department of Education
Bureau of Vocational Education
Augusta, Maine

Also available through ERIC, ED 080-760

General information including a format for helping students visualize job families in several different areas.

Vocational Entry-Skills for Secondary Students: A Manual of Teaching Units with Student Worksheets by Winifred Y. Washburn, available from:
Academic Therapy Publications
San Rafael, California

Aimed toward helping the learning disabled student become acquainted with a wide variety of skills.

AGRIBUSINESS AND NATURAL RESOURCES

Teaching the Meaning and Importance of Agribusiness available from:
Mississippi State University
Research and Curriculum Unit for Vocational and Technical Education
Mississippi State, Mississippi

Also available through ERIC, ED 132-246 and ED 132-240

Teacher and student materials in agribusiness. Developed for average students but could be easily adapted for special needs learners.

Special Needs Curriculum Guide available from:
Idaho State Board of Vocational Education
Boise, Idaho

Also available through ERIC, ED 118-889.

Designed for special needs students. Units covering several vocational areas, including horticulture (gardening, groundkeeping, and landscaping).

Agriculture/Natural Resources Cluster Guide, available from:
Central Michigan University
Mount Pleasant, Michigan 48859

Written for the special needs learner.

BUSINESS AND OFFICE

Basic Business: A Teacher's Guide to an Employment Orientation Course for Special Needs Students, available from:
Vocational Technical Curriculum Lab
Rutgers--The State University
Bldg. 4103, Kilmer Campus
New Brunswick, New Jersey

Developed for use with special needs students.

Introduction to Business and Office Careers by Grady Kimbrel, available from:
McKnight Publishing Company
Box 2854
Bloomington, Illinois 61701

This is a kit containing student and teacher materials, filmstrips and tapes. Reading level high and therefore probably not usable with non- or poor-reading students.

Type with One Hand by Nina K. Richardson, available from:
South-Western Publishing Company
11310 Gemini
Dallas, Texas

Typing guide for handicapped students who only have the use of one hand.

You Learn to Type! by Nathan Krevolin and Alan C. Lloyd, available from:
Gregg Division/McGraw Hill Book Company
Dallas, Texas

According to the instructions, the book can be used by anyone with at least a nine-year-old maturity level.

Official Occupational Skills Program Handbook. Vocational-Technical Education: A Handbook for the Occupational Skills Program for Special Education Students, available from:
Hawaii State Department of Education
Office of Instructional Services
Honolulu, Hawaii

Also available through ERIC, ED 065-670

Includes a section on business and office.

Office and Business Occupations Cluster Guide, available from:
Central Michigan University
Mt. Pleasant, Michigan 48859

Written for the special needs student

CONSTRUCTION

General Construction Trades, Volume I, available from:
Occupational Curriculum Laboratory
c/o John Hayes
East Texas State University
Commerce, Texas 75428

The section that can be most used in an exploration class is the Introduction. This section is probably detailed enough for a complete exploration unit.

Introduction to Construction Careers by Donald G. Lux, available from:
McKnight Publishing Company
Box 2854
Bloomington, Illinois 61701

This is a kit containing student and teacher materials, filmstrips and tapes. Reading level is high and therefore probably not usable with non- or poor-reading students. Many of the activities can be adapted for use, however.

Official Occupational Skills Program Handbook. Vocational-Technical Education: A Handbook for the Occupational Skills Program for Special Education Students, available from:
Hawaii State Department of Education
Office of Instructional Services
Honolulu, Hawaii

Also available through ERIC, ED 065-670

Includes a section on construction.

Special Needs Curriculum Guide, available from:
Idaho State Board of Vocational Education
Boise, Idaho

Also available through ERIC, ED 118-889.

This includes construction and remodeling (exterior home maintenance, masonry, woodworking and carpentry, home repairs--including interior maintenance, painting and wall papering, electricity, plumbing).

Construction Cluster Guide, available from:
Central Michigan University
Mt. Pleasant, Michigan 48859

Written for the special needs student.

MARKETING AND DISTRIBUTION

Orientation to Marketing Careers, available from:
Florida Department of Education
Tallahassee, Florida

Developed for average students to be used in a regular occupational exploration class. Requires quite a bit of reading and therefore may need to be modified for some students.

Career Exploration in Marketing and Distribution by Alice K. Gordon and others, available from:
Contract Research Corporation
Belmont, Massachusetts

Also available from ERIC, ED 122-026.

Developed for average students, but has many activities that can be adapted for use with special needs students.

Distribution Cluster Guide, available from:
Central Michigan University
Mt. Pleasant, Michigan 48859

Written for the special needs student.

PERSONAL SERVICES

Official Occupational Skills Program Handbook. Vocational Technical Education. Handbook for the Occupational Skills Program for Special Education Students, available from:
Hawaii State Department of Education
Office of Instructional Services
Honolulu, Hawaii

Also available from ERIC, ED 065-670

Special Needs Curriculum Guide, available from:
Idaho State Board of Vocational Education
Boise, Idaho

Also available from ERIC, ED 118-889.

Includes laundry/dry cleaning, food service, custodial/housekeeping. Includes sample units and lesson plans, pre and posttests.

Career Orientation Series: The Personal Service Cluster, available from:
Ohio Department of Education
Columbus, Ohio 43215

Also available through ERIC, ED 146 337.

Not a curriculum guide. Written for the eighth grade student. Describes the personal service field, five careers, lists resources and vocabulary.

TRANSPORTATION

Special Needs Curriculum Guide, available from;
Idaho State Board of Vocational Education
Boise, Idaho

Also available from ERIC, ED 118-889.

Includes units on mechanics and motors (small engine, bicycle maintenance, automotive upkeep, pre-driver training, gas and arc welding).

Automotive and Power Service Cluster Guide, available from:
Central Michigan University
Mt. Pleasant, Michigan 48859

Written for the special needs students. Contains units on several areas of auto service and repair.